

Ganzheitlich Denken – Integrative Therapieansätze

Dr. med. Kurt Mosetter
ZiT Konstanz, Freiburg, Gutach, Baar

Informationstag Brustkrebs
Hamburg, 18. Februar 2024

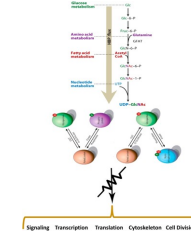
Mit Strategie Gesund
Dr. Mosetter
PRINZIP.

Mammazentrum
AM KRANKENHAUS
JERUSALEM Hamburg





Medizin und Wissenschaft treffen auf traditionelle Erfahrungsheilkunde und Ernährung



Dr. B. Mana, Dr. B. Clark, Dr. Y. Donden

Kathmandu (Nepal)
Ayurveda, Tibetische Medizin
Ernährung, Stoffwechsel, Heilkräuter
1986 - 1997

Shifu Shaofun

St. Gallen
Chinesische Medizin, Akupunktur
Qi Gong ...
2002 - 2014

Angela Yan

Peking / Buffalo
Qi Gong, Chinesische Medizin,
Akupunktur
2004 - 2016



Werner Mosetter

Gutach
Elektroingenieur, Physik
Weston Price-Ernährung

Prof. Dr. med. Werner Reutter

Charite Berlin, Biochemie,
Molekularbiologie
Energie- und Zuckerstoffwechsel
1992 - 2016

Prof. Dr. med. Dieter Felsenberg

Charité Berlin
Muskel-Knochenforschung, ESA
Galileo Training
2002- 2022

Prof. Dr. med. Katharina Pachmann

DKFZ Heidelberg/ Bayreuth
Molekularbiologie, Onkologie
2002 - 2024

Dr. W. A. Simon

Biochemie, Oxidativer Stress
Konstanz
1996 - 2024

Die Geschichte von drei Freunden & von betroffenen Menschen lernen



Inspiration und Erfahrung: Papa Werner,
*17.01.1919
36 Jahre MS & Schmerzen, 24 Jahre Rollstuhl... Und trotzdem:
Unerwartete „Brücken“ konnten 1988 Wege in die Heilung eröffnen.



Werner Reutter,
*05.02.1937 - 28.05.2016
Direktor in der Abteilung
Molekularbiologie &
Biochemie, Charite Berlin

Onkel Erich, Gutach : *17.01.1920.
1990 Rezidiv eines Nierenzellkarzinoms mit 18 Lungenmetastasen,
9 Lebermetastasen und mindestens 5 knöchernen Metastasen in der HWS. Vollständige Remission
1995, beste Gesundheit bis zum Einschlafen. 2006
Frau. M.L., Konstanz : 1990
Rezidiv eines metastasierten Mamma CA. Remission 1995

Das Wesentlich um Hintergründe, gesunde Ressourcen und wirklich individualisierte Medizin lernen wir von Patientinnen

PF, geb. 1969: Erstkonsultation 25.04.2018

- 2012 Mammkarzinom, 2 Resektion Op's mit 12 Zyklen Chemo plus Tamoxifen
- 2013 Rezidiv mit Brustentfernung links und rechts
- 2015 Nierenkarzinom, operative Entfernung
- 2017 Rezidiv mit Rezidiv in den Brustwarzen, Resektion, palliative Medizin



Medical Tribune, Heidelbeeren senken wohl die Krankheitsaktivität
Autor: Maria Fett © fotolia/azure

Basistherapie ab 25.04.2018: modifizierte ketogene Ernährung, Phytopharmaka & individualisierte molekulare Naturstoffe & Psychotherapie, Körperpsychotherapie, Kinesiologie



<https://www.projectnoah.org/spottings/1980070506>

05.05.2022: Vollständige Remission

Neue Selbständigkeit mit ihrem Traum-Beruf



Pascoe



Deutsche Apotheker Zeitung



By Angharad Brewer Gillham, Frontiers science



Präbiotika,
Akazie, Galactose

Ursprünge in Ayurveda und Naturmedizin

Vor- & Nachsorge bei Krebs:

Darmgesundheit
Ernährungsmedizin
Zucker, Pizza, Pasta, Cola Ban
Very low Carb
Phytopharmaka: Curcumin...
Körperliche Aktivität
Muskeln als Hormondrüse...
Yoga, Qi Gong, Thai Chi
Meditation & Schlaf
„erste Epigenetik“



Dr. med. B. Mana in Kathmandu



<https://www.projectnoah.org/spottings/1980070506/fullscreen>



Ernährung als Schlüssel zu Darm- & Stoffwechselfgesundheit & Schutz vor Krebs

Phytopharmaka



See discussions, stats, and author profiles for this publication at:
<https://www.researchgate.net/publication/334145036> Taxonomic notes on Indian Terminalia (Combretaceae)
Article in *Plant Science Today* · July 2019 DOI: 10.14719/pst.2019.6.3.539

Fasten, Meditation & Kräuter

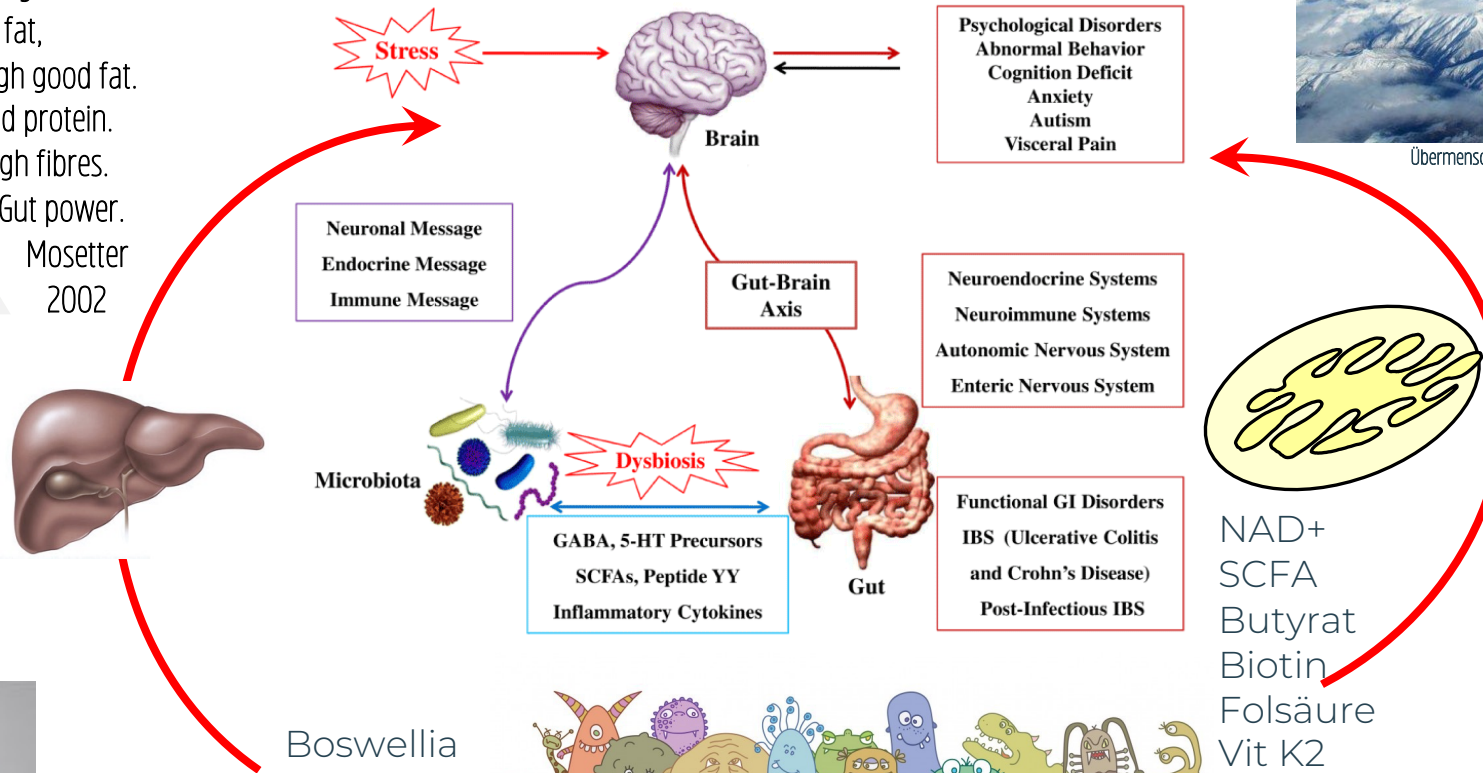
Ashwagandha, Reishi, Cannabis, Lotus



Low bad carbs,
but some good carbs.
No bad fat,
but high good fat.
Good protein.
High fibres.
Gut power.
Mosetter
2002



Übermenschliche Fähigkeiten von Himalaya-Mönchen verblüffen Harvard-Wissenschaftler
(Published on Mai 18, 2017 in Welt)

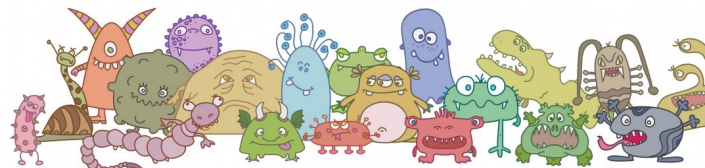


Gut/brain axis and the microbiota
Mayer EA, Tillisch K, Gupta A.
J Clin Invest. 2015 Mar 2;125(3):926-38.

„Starke Beine, klarer Kopf,
langes Leben“



Boswellia
Curcuma
Astragalus
Myrobalan
Cordyceps
Mistel



MIKROBENZIRKUS IST WISSENSCHAFTSBLOG 2018

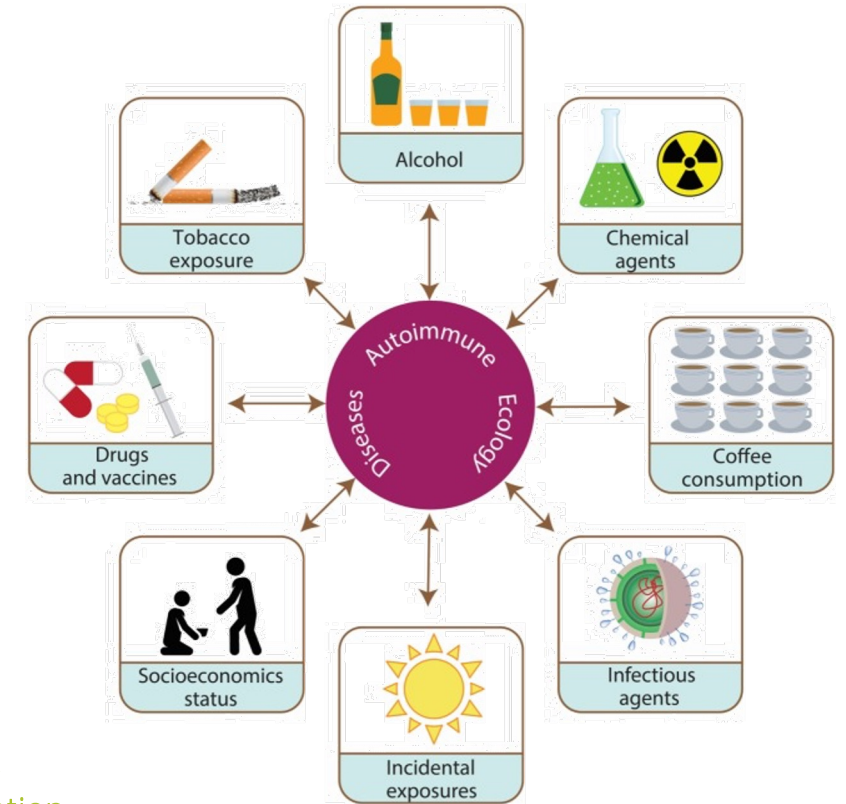
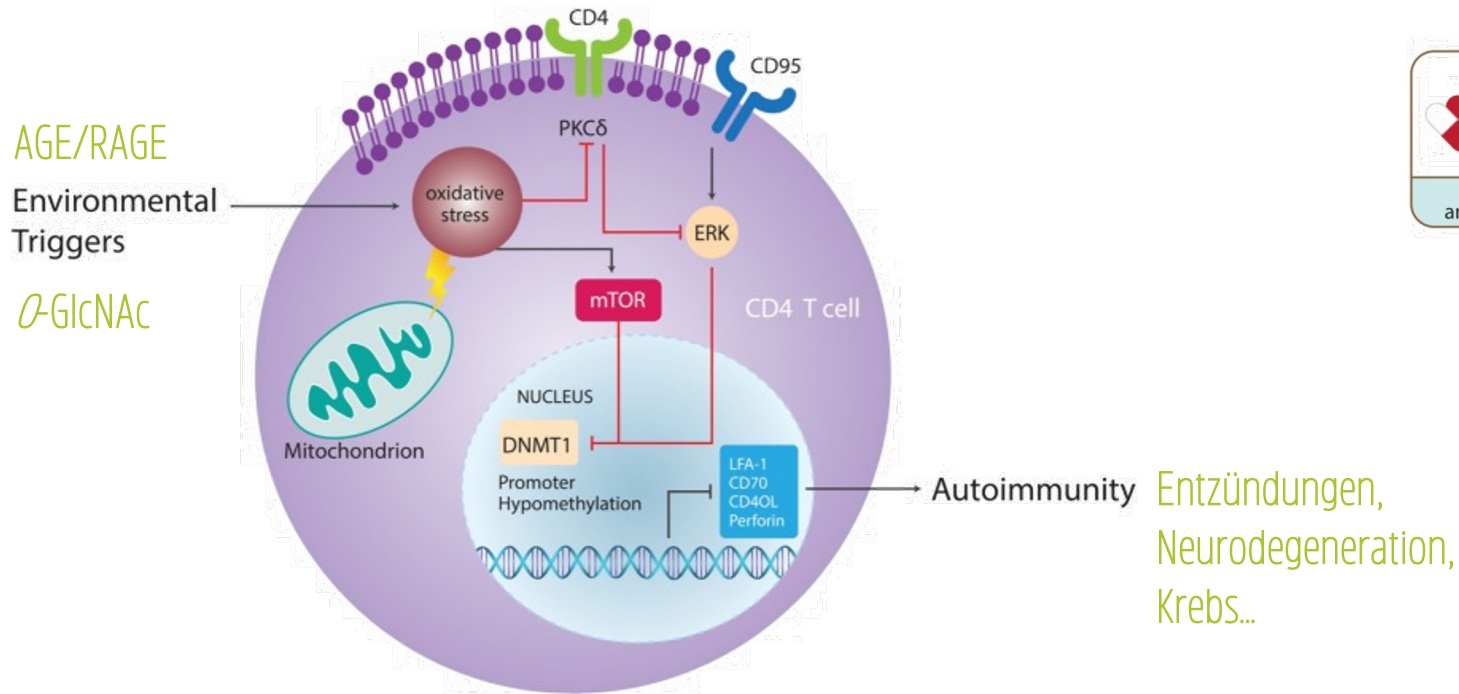


Medical Tribune, Heidelbeeren senken wohl die Krankheitsaktivität
Autor: Maria Fett © fotolia/azure

Heidelbeeren, Gojee, Brokkoli,
Blumenkohl, Nüsse, Linsen,
Kichererbsen, Gewürze

Unser Lebensstil und unsere Umwelt schalten Gene an und aus. Unser Verhalten kann Gene auf Sturm trimmen oder auf Reparatur.

Zucker, kurzkettige Kohlenhydrate, verarbeitetes Fleisch und Getreide, Immobilisation, Umweltgifte, Schwermetalle, Konservierungsstoffe, Glyphosat, viele Medikamente schädigen die Mitochondrien, belasten den Darm und das Mikrobiom, behindern notwendige Reparaturmaßnahmen und schädigen die DNA.



[Extracellular matrix glycation and receptor for advanced glycation end-products activation: a missing piece in the puzzle of the association between diabetes and cancer.](#)

Rojas A, Añazco C, González I, Araya P.
Carcinogenesis. 2018 Apr 5;39(4):515-521.

Eine Bilderreise: Lehrer & Mentoren 1992 – 2016

Erforschung der Galactose, Mannose & Glycane

Glykobiologie, Zuckerstoffwechsel, Energiestoffwechsel im Gehirn & Insulinresistenz



Prof. Dr. med. W. Reutter,
Direktor der Abteilung
Biochemie und
Molekularbiologie
an der Charité in Berlin

100-jährige in Naturvölkern haben Adleraugen;
Sie kennen keine Niereninsuffizienz, keinen Bluthochdruck,
keinen Herzinfarkt, keine Demenz, keinen Krebs...

Der Feind Nummer 1 für die Netzhaut und das Auge, die
Mesangialzellen und Niere, für die Nerven, das Immunsystem,
Gliazellen und das Gehirn ist ZUCKER.

Die Spätfolgen des Diabetes Typ 2 sind keine späten
Veränderungen, sondern beginnen 10 Jahre vor der Diabetes
Erkrankung.

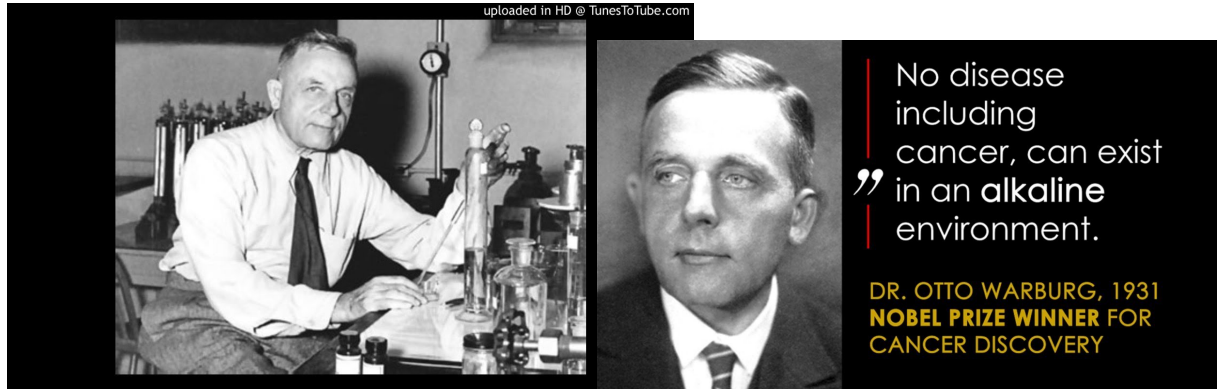
→ 2008: Metabolisch Frühmarker und LaborPattern



Prof. Dr. med. R. Greger
Physiologie & Nephrologie
Hobby: Augen
Universität Freiburg 1988

Warburg O., Posener K., Negelein E. Über den Stoffwechsel der Carcinomzelle. Biochem Z. 1924;152:309–343

THE METABOLISM OF TUMORS IN THE BODY
 Otto Warburg, Franz Wind, and Erwin Negelein
 J Gen Physiol. 1927 Mar 7; 8(6): 519–530.



1. Krebs ist eine Stoffwechselerkrankung
2. Glucose aktiviert das Krebszellwachstum und die Metastasierung
3. Galactose hemmt Krebszellen

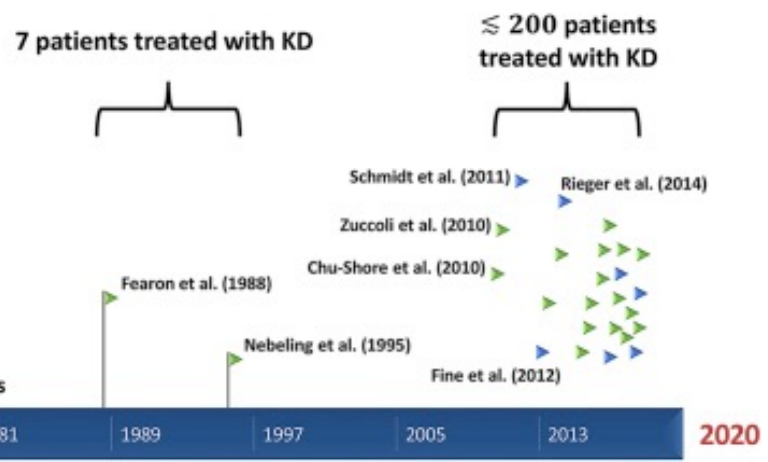


Pascoe

Miraculix und Asterix und Obelix
 Galactose ist der Zaubertrank



Roughly half a century before the putatively first study using a ketogenic diet (KD) for cancer patients, Wilhelm Brünings had treated ≈100 patients with a ketogenic diet + insulin
Goal: To target tumor metabolism through hypoglycemia
Results: Remarkable short-term tumor regression and quality of life improvement



1941 1941 1949 1957 1965 1973 1981 1989 1997 2005 2013 2020

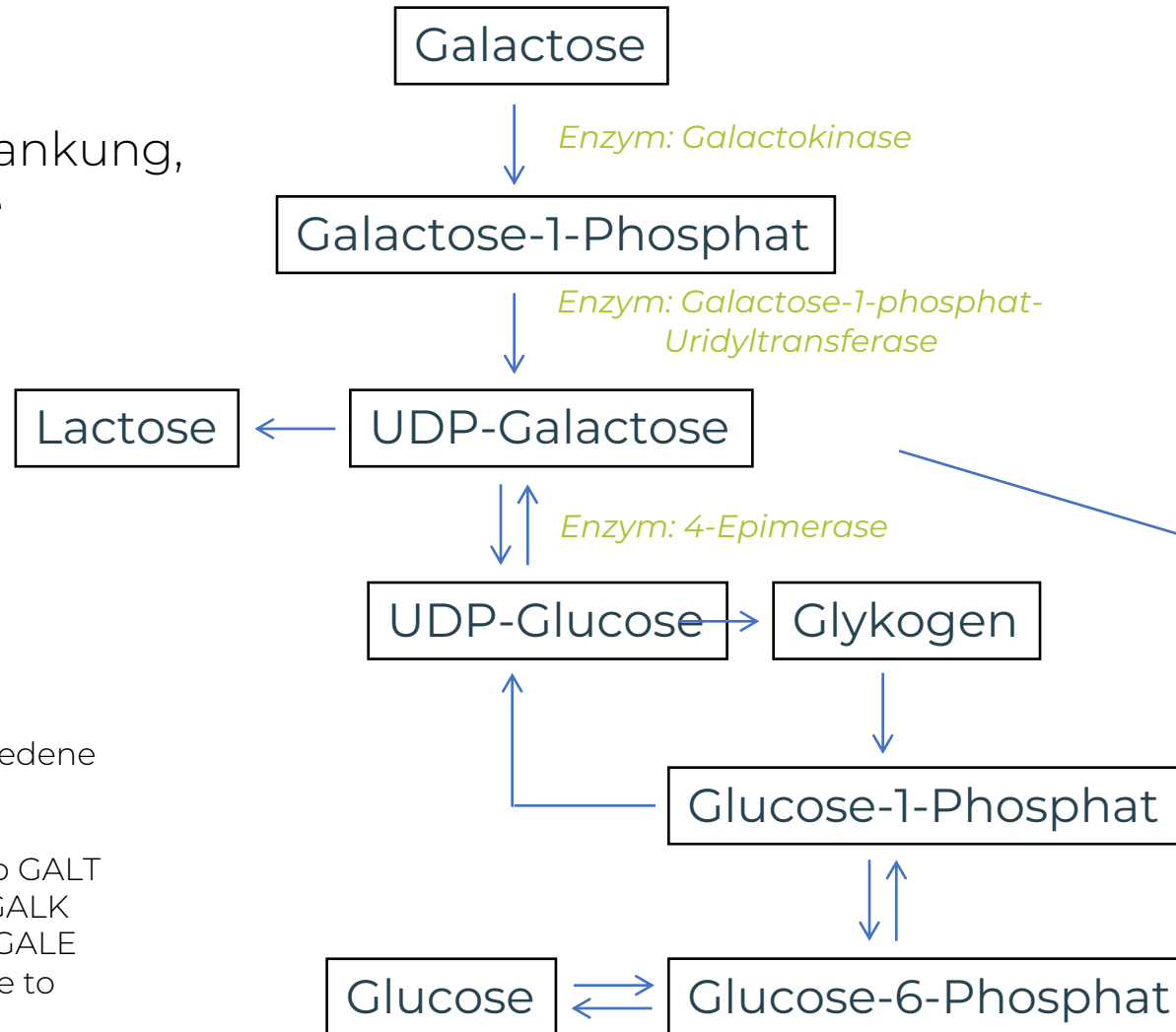
Cell Metab. 2022 Mar 1;34(3):355–377.
 The hallmarks of cancer metabolism: Still emerging
 Natalya N Pavlova¹, Jiajun Zhu², Craig B Thompson³

Int J Mol Sci. 2022 Jan 21;23(3):1155. Cancer as a Metabolic Disorder Jones Gyamfi^{1,2}, Jinyoung Kim¹, Junjeong Choi¹

Krebszellen sind Zuckersüchtig, stürzen sich auf den Zwilling der Glucose, die Galactose. Da diese Zellen an einer Galactosämie leiden, bleibt ihnen die Galactose im Halse stecken

Eine seltene Stoffwechselerkrankung, die Galactosämie
1: 55000
Weit verbreitet unter Krebszelle

Im Detail sollten 4 verschiedene Muster der Galactosämie unterschieden werden.
galactosemia type I due to GALT deficiency, type II due to GALK deficiency, type III due to GALE deficiency, and type IV due to GALM deficiency



Pascoe

Heteroglykane
Glykosaminoglykane
Hyaluronan
Kollagen
Telocyten-Wasser
Alle Bindegewebe im Körper
und im Gehirn,
alle Faszien

Mosetter 2002



Liver lectin blocking with D-galactose to prevent hepatic metastases in colorectal carcinoma patients.

Isenberg J, Stoffel B, Stützer H, Otte K, Beuth J.

Clinics and Policlinics for Surgery, University Cologne, Germany.

Beuth J, Ko HL, Oette K, Pulverer G, Roszkowski K, Uhlenbruck G (1987) Inhibition of liver metastasis in mice by blocking of hepatocyte lectins with arabinogalactan infusions and D-galactose. J Cancer Res Clin Oncol 113:51-55

Mistellektin-1: neue therapeutische Perspektiven in der Onkologie

Beuth J. · Stoffel B. · Ko H.L. · Jeljaszewicz J. · Pulverer G.
Onkologie 1995;18:36-40 (DOI:10.1159/000218677)

Blockade der Leberlektine durch Galaktoseinfusionen: therapeutisches Konzept zur Metastasenprophylaxe

Pulverer G. · Ko H.L. · Beuth J. · Uhlenbruck G. · Oette K. · Isenberg J. · Pichlmaier H.
Onkologie 1995;18:51-54 (DOI:10.1159/000218679)

Galactose als Infusion Galactose wirkt oral sehr gut Dosierungen von 1,5g/kg Körpergewicht sind sicher

ANTICANCER RESEARCH 17: 1223-1226 (1997)

Prevention of Hepatic Metastases by Liver Lectin Blocking with D-Galactose in Colon Cancer Patients. A Prospectively Randomized Clinical Trial

P. WARCZYNSKI¹, J. GILJ¹, S. SZMIGIELSKI², J. BEUTH³ and G. PULVERER³

¹MMA Postgraduate Medical School Warsaw, Poland;

²Military Institute of Hygiene and Epidemiology, Warsaw, Poland;

³Institute of Medical Microbiology and Hygiene, University of Koeln, Goldenfelsstr. 19-21, 50935 Koeln, Germany

Abstract. 76 colon adenocarcinoma patients (stages I-3, NO, MO) were enrolled into a prospectively randomized clinical trial. 39 patients were perioperatively treated with D-galactose (therapy group: 1.9 g/kg BW and day) or D-glucose-containing electrolyte infusions (control group: n = 37). There were no cases of perioperative mortality. The complication rate was 17.1% (therapy group: 15.3%; control group: 18.9%). Since tumor staging and grading were equally distributed for therapy and control groups, a non-stratified statistical analysis yielded a) significantly reduced hepatic metastases and b) improved overall survival for patients of the therapy group. Stage-dependent analysis demonstrated that stage 3 carcinoma patients of the treatment group developed significantly less hepatic metastases as compared to patients of the control group.

Approximately 50% of patients who develop colorectal carcinoma do not survive 5 years although surgery with curative intent is possible in about 80% of all cases. In order to reduce the high mortality rate, adjuvant treatment modalities are warranted to improve the prognosis for these patients (1).

Recently, it has been shown that cell-associated glycoconjugates are involved in the metastatic spread of tumor cells (2, 3, 4). After the discovery of vertebrate lectins

competitive ligand-bearing glycoconjugates as well as by autoantibodies and downregulation of membrane lectins in certain liver diseases may inhibit the metastatic spread into the liver (6, 7). Recent *in vitro/in vivo* experiments proved these postulations and demonstrated that the homing of tumor cells into the liver can be significantly inhibited by non-immunogenic galactans and D-galactose in different murine model systems (8, 9, 10).

To investigate clinical effects of a perioperative prophylaxis of hepatic metastases by liver lectin blocking, D-galactose administration, a prospectively randomized clinical trial was performed in colon carcinoma patients.

Patients and Methods

76 patients (female n = 25, male n = 51; mean age 62.7 ± 6.0 years) of the MMA Postgraduate Medical School, Warsaw, Poland with surgical treatment of colon adenocarcinoma were enrolled into a prospectively randomized clinical trial between July 1990 and June 1993 with agreement of the Ethics Committee. After clinical verification of malignancy (endoscopy, barium enema) and after exclusion of distant spread (sonography, chest radiography, liver scintigraphy and computed tomography as required) patients were randomized by means of a random list into treatment (n = 39) and control group (n = 37, Table I). Informed consent was obtained from patients before they were enrolled into the study.

SCIENCE

On the Origin of Cancer Cells

Otto Warburg

Our principal experimental object for the measurement of the metabolism of cancer cells is today no longer the tumor but the ascites cancer cells (1) living free in the abdominal cavity, which are almost pure cultures of cancer cells with which one can work quantitatively as in chemical analysis. Formerly, it could be said of tumors, with their varying cancer cell content, that they ferment more strongly the more cancer cells they contain, but today we can determine the absolute fermentation values of the cancer cells and find such high values that we come very close to the fermentation values of wildly proliferating *Torula* yeasts.

What was formerly only qualitative has now become quantitative. What was formerly only probable has now become certain. The era in which the fermentation of the cancer cells or its importance could be disputed is over, and no one today can doubt that we understand the origin of cancer cells if we know how their large fermentation originates, or, to express it more fully, if we know how the damaged respiration and the excessive fermentation of the cancer cells originate.

Energy of Respiration and Fermentation

We now understand the chemical mechanism of respiration and fermentation almost completely, but we do not need this knowledge for what follows, since energy alone will be the center of our considerations. We need to know no more of respiration and fermentation here than that they are energy-produc-

ing reactions and that they synthesize the energy-rich adenosine triphosphate, through which the energy of respiration and fermentation is then made available for life. Since it is known how much adenosine triphosphate can be synthesized by respiration and how much by fermentation, we can write immediately the potential, biologically utilizable energy production of any cells if we have measured their respiration and fermentation. With the ascites cancer cells of the mouse, for example, we find an average respiration of 7 cubic millimeters of oxygen consumed per milligram, per hour, and fermentation of 60 cubic millimeters of lactic acid produced per milligram, per hour. This, converted to energy equivalents, means that the cancer cells can obtain approximately the same amount of energy from fermentation as from respiration, whereas the normal body cells obtain much more energy from respiration than from fermentation. For example, the liver and kidney of an adult animal obtain about 100 times as much energy from respiration as from fermentation.

I shall not consider aerobic fermentation, which is a result of the interaction of respiration and fermentation, because aerobic fermentation is too labile and too dependent on external conditions. Of importance for the considerations that follow are only the two stable independent metabolic processes, respiration and anaerobic fermentation—respiration, which is measured by the oxygen consumption of cells that are saturated with oxygen, and fermentation, which is measured by the formation of lactic acid in the absence of oxygen.

Injuring of Respiration

Since the respiration of all cancer cells is damaged, our first question is, How can the respiration of body cells be injured? Of this damage to respiration, it can be said at the outset that it must be irreversible, since the respiration of cancer cells never returns to normal. Second, the injury to respiration must not be so great that the cells are killed, for then no cancer cells could result. If respiration is damaged when it forms too little adenosine triphosphate, it may be either that the oxygen consumption has been decreased or that, with undiminished oxygen consumption, the coupling between respiration and the formation of adenosine triphosphate has been broken, as was first pointed out by Feodor Lynen (2).

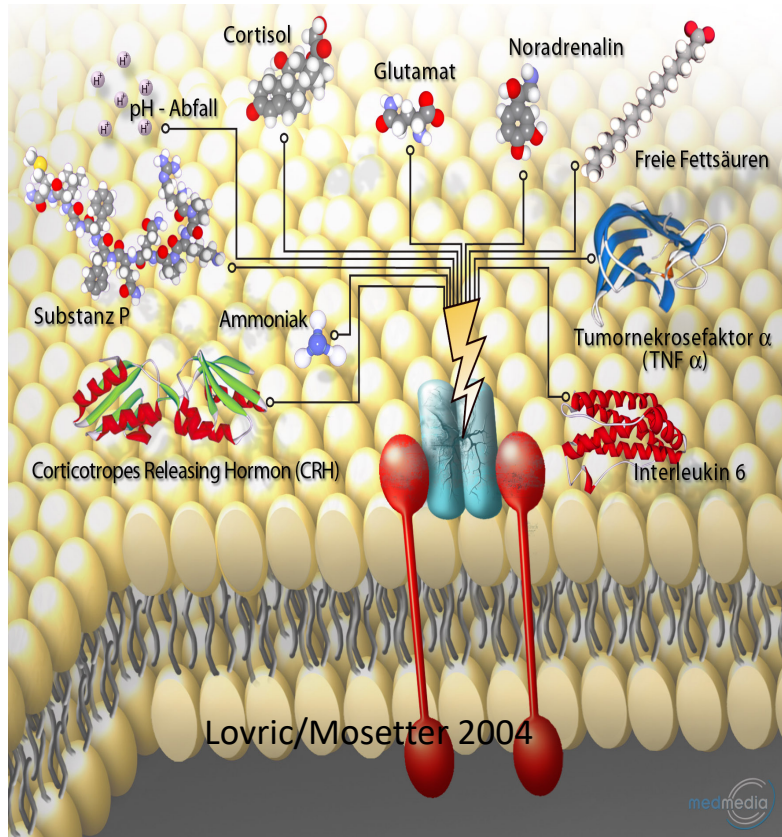
One method for the destruction of the respiration of body cells is removal of oxygen. If, for example, embryonal tissue is exposed to an oxygen deficiency for some hours and then is placed in oxygen again, 50 percent or more of the respiration is usually destroyed. The cause of this destruction of respiration is lack of energy. As a matter of fact, the cells need their respiratory energy to preserve their structure, and if respiration is inhibited, both structure and respiration disappear.

Another method for destroying respiration is to use respiratory poisons. From the standpoint of energy, this method comes to the same result as the first method. No matter whether oxygen is withdrawn from the cell or whether the oxygen is prevented from reacting by a poison, the result is the same in both cases—namely, impairment of respiration from lack of energy.

I may mention a few respiratory poisons. A strong, specific respiratory poison is arsenious acid, which, as every clinician knows, may produce cancer. Hydrogen sulfide and many of its deriv-

Professor Warburg is director of the Max Planck Institute for Cell Physiology, Berlin-Dahlem, Germany. This article is based on a lecture delivered at Stuttgart on 25 May 1955 before the German Central Committee for Cancer Control. It was first published in German (*Naturwissenschaften* 42, 461 (1955)). This translation was prepared by Dean Buck, John Hunter, and W. H. Eberhardt of the U.S. Department of Health, Education, and Welfare, Public Health Service, National Institutes of Health, Bethesda, Md., with the permission of *Naturwissenschaften* and with the collaboration of Professor Warburg, who has introduced additional material.

Zucker, kurzkettige Kohlenhydrate, Süßes, Süßgetränke, Fruchtsäfte verursachen Insulinresistenz

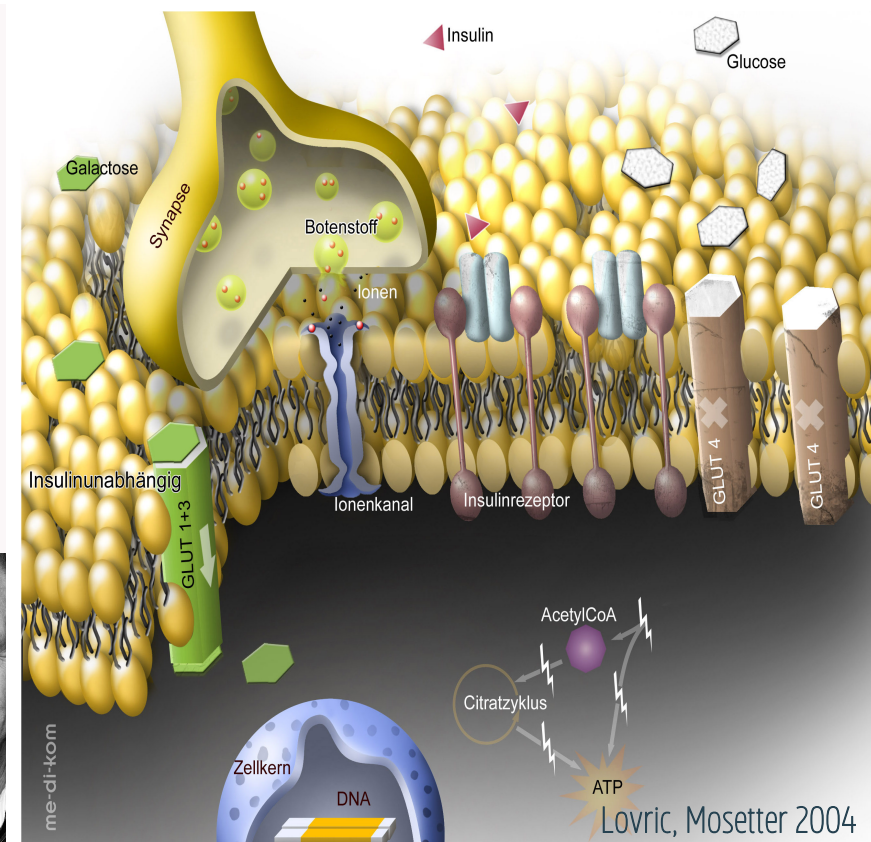


Energiemangel und Hungersnot im inneren der Zelle,- außen „karamelisiert“ Zucker und macht Krank

THE 56 NAMES OF SUGAR

Buttered syrup, Cane sugar, Dextrose, Caramel, Brown sugar, Corn syrup, Cane juice, Corn syrup solids, Beet sugar, Confectioners' sugar, Dehydrated cane juice, Fruit juice concentrate, Agave nectar, Demerara sugar, Diastatic malt, Diastase, Maltose, Fructose, Malt sugar, Mannitol, Florida crystals, Molasses, Yellow sugar, Carob syrup, Lactose, Panocha, Raw sugar, Rice syrup, Castor sugar, HFCS (High Fructose Corn Syrup), Golden sugar, Muscovado, Barbados sugar, Grape sugar, Maple syrup, Honey, Barley malt, Refiner's Syrup, Sugar (granulated), Turbinado sugar, Golden syrup, Fruit juice, Icing sugar, Dextran, Glucose, Date sugar, Ethyl maltol.

SUGAR & YOUR HEALTH
DR. ROBERT LUSTIG
HUBERMAN LAB



[Short Chain Fatty Acids in the Colon and Peripheral Tissues: A Focus on Butyrate, Colon Cancer, Obesity and Insulin Resistance.](#)

McNabney SM et al. Nutrients. (2017)

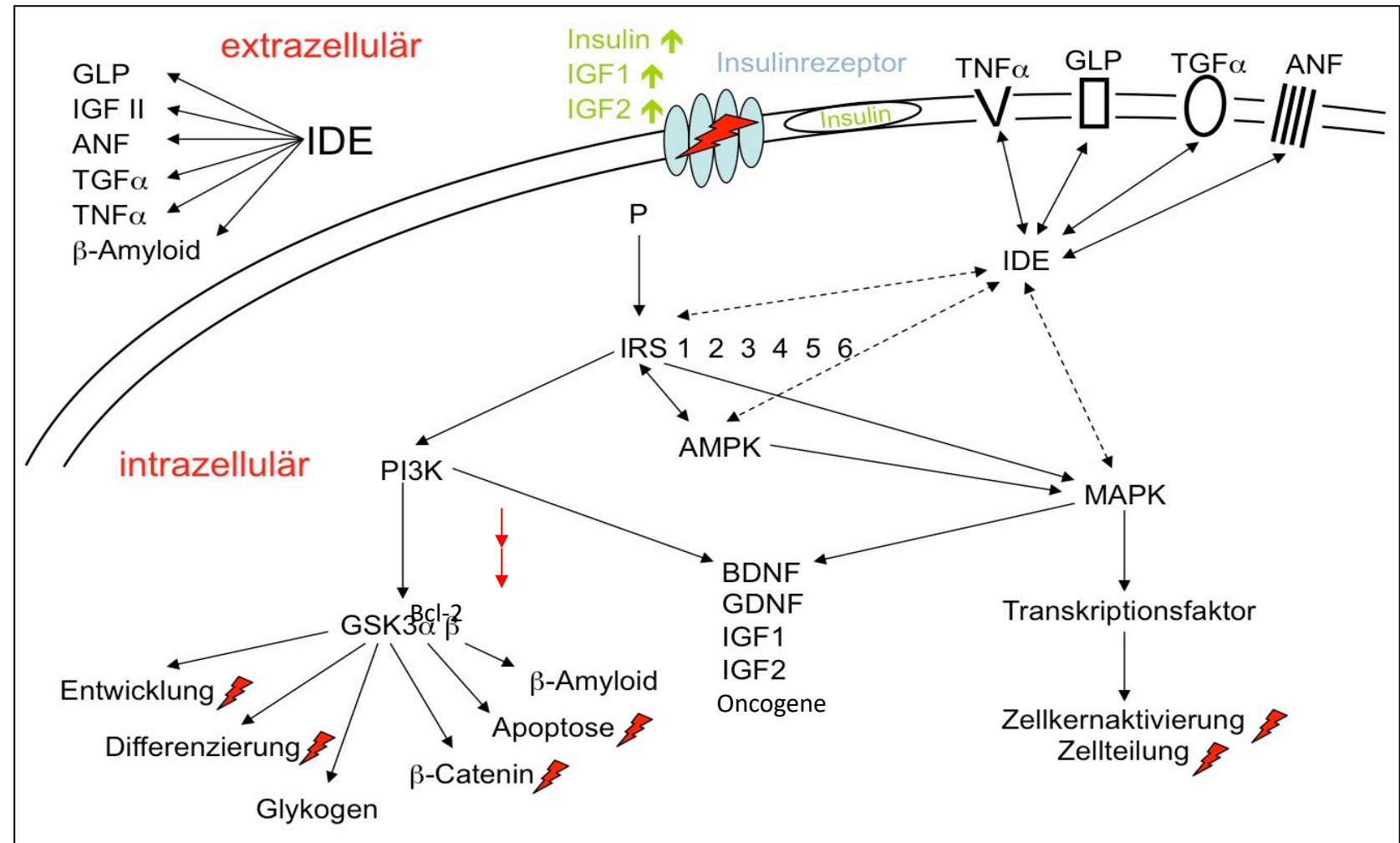
[PTEN, Insulin Resistance and Cancer.](#) Li A et al. Curr Pharm Des. (2017)

[Trimethylamine N-oxide \(TMAO\) as a New Potential Therapeutic Target for Insulin Resistance and Cancer.](#)

Oellgaard J et al.

Curr Pharm Des. (2017)

Zucker, Fructose, Insulin und IGF1 schlagen Öl ins Feuer bis in die Tiefe der Genregulation!



A metabolic profile of all-cause mortality risk identified in an observational study of 44,168 individuals
 Joris Deelen, Johannes Kettunen, [...], P. Eline Slagboom
Nature Communications volume 10, Article number: 3346 (2019)

14 biomarkers showed to be independently associated with mortality. For the total lipids in chylomicrons and extremely large VLDL and small high-density lipoprotein (HDL), the mean diameter for VLDL particles, the ratio of polyunsaturated fatty acids to total fatty acids, and the concentrations of histidine, leucine, valine, and albumin a higher level is associated with decreased mortality, while for the concentrations of glucose, lactate, isoleucine, phenylalanine, acetoacetate, and GlycA the opposite applies



<https://i.ytimg.com/vi/053hWuwMe88/maxresdefault.jpg>

Das Ausmaß dieser Glykierung und des Schwelbrandes ist messbar:

- Langzeitzuckerwert HbA1c
- HOMA-Index

Mol Cell Biochem. 2021 Feb;476(2):585-598.
AGE-RAGE synergy influences programmed cell death signaling to promote cancer
[Bhargav N Waghela](#)^{#1}, [Foram U Vaidya](#)^{#1}, [Kishu Ranjan](#)², [Abu Sufiyan Chhipa](#)¹, [Budhi Sagar Tiwari](#)¹, [Chandramani Pathak](#)³

Zucker & Insulinresistenz:

Wenn Zucker mit Eiweiß karamelisiert und anbrennt, nennt man das „Glykierung“.

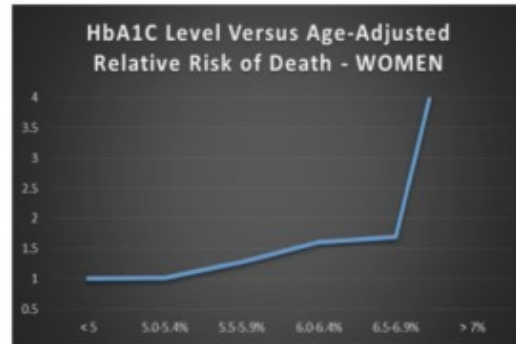
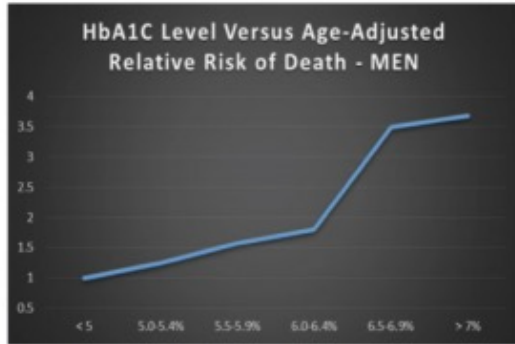


<https://i.ytimg.com/vi/053hWuwMe88/maxresdefault.jpg>

Cell Metab. 2022 Mar 1;34(3):355-377.
The hallmarks of cancer metabolism: Still emerging
[Natalya N Pavlova](#)¹, [Jiajun Zhu](#)², [Craig B Thompson](#)³

[Biomed Rep.](#) 2021 May; 14(5): 46.
Toxicity of advanced glycation end products (Review)
[Aleksandra Kuzan](#)

Glucose Levels Anyone? - HbA1c as a Risk Factor



Data taken from Table 2: Association of Hemoglobin A_{1c} with Cardiovascular Disease and Mortality in Adults: The European Prospective Investigation into Cancer in Norfolk
 Kay-Tee Khaw, MBBChir, FRCP; Nicholas Wareham, MBBS, FRCP; Sheila Bingham, PhD; Robert Luben, BSc; Ailsa Welch, BSc; and Nicholas Day, PhD

Key Takeaways:

- ❖ HbA1c is the alteration of Red Blood Cells driven by blood glucose levels
- ❖ This again is closely related to Insulin & Insulin Resistance Status
- ❖ HbA1c from this particular study is also an **independent** risk factor

2013 June Cummins RFI(Chem) MIF1

Glycated Hemoglobin Predicts All-Cause, Cardiovascular, and Cancer Mortality in People

Guenther Silbernagel, MD^{1,2},

1. Tanja B. Grammer, MD³,

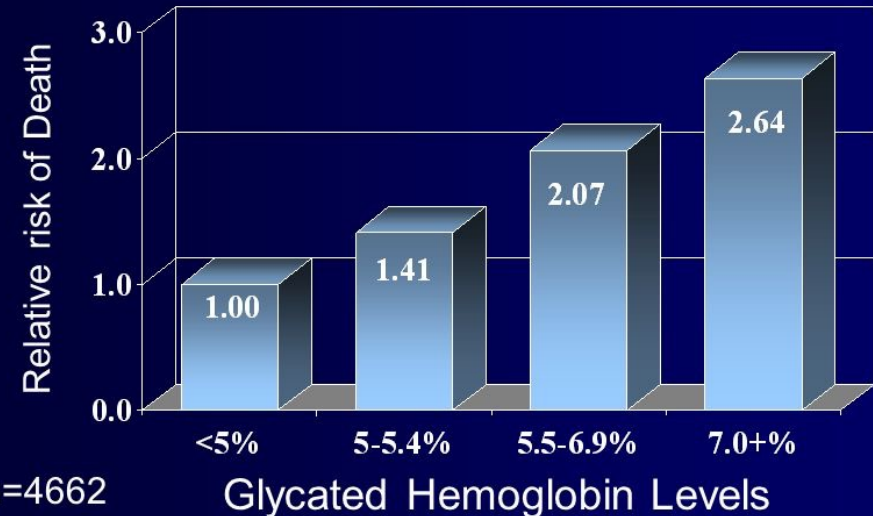
2. Bernhard R. Winkelmann, MD⁴,

3. Bernhard O. Boehm, MD⁵ and

4. Winfried März, MD^{3,6,7}

Diabetes Care 2011 Jun; 34(6): 1355-1361

Glycated Hemoglobin and Mortality from All Causes



n=4662

Glycated Hemoglobin Levels

© 1997 - 2004 LifeLong Health

British Med. Jour., Jan. 6, 2001

55

Cancer Epidemiol Biomarkers Prev. 2020 Jun;29(6):1107-1119.

Diabetes, Glycated Hemoglobin, and Risk of Cancer in the UK Biobank Study

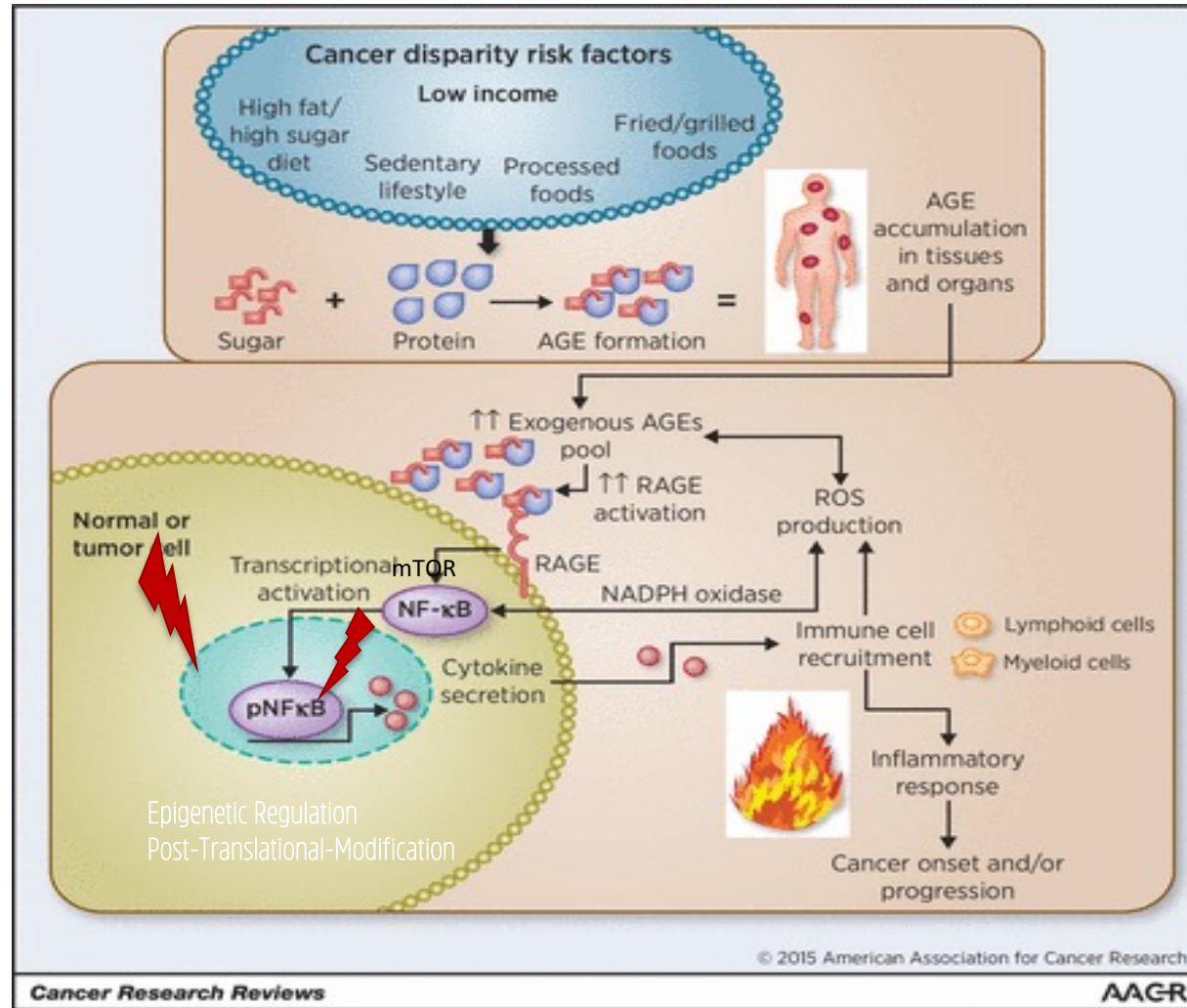
[Rita Peila](#)¹, [Thomas E Rohan](#)²

Baseline glycated hemoglobin was predictive of all-cause, cardiovascular, and cancer mortality!

Immunometabolismus & „Zucker-Signale“ bei Krebs

Hyperglykämie
 Insulin/ IGF-1
 Inflammation
 Glycation
 AGE / RAGE
 mTOR
 NF-κB
 O-GlcNAc
 Acylation
 Glycosylation
 Ribosylation

Tumorigene-
 sis,
 Cell death
 Apoptosis
 Autophagy
 Necroptosis

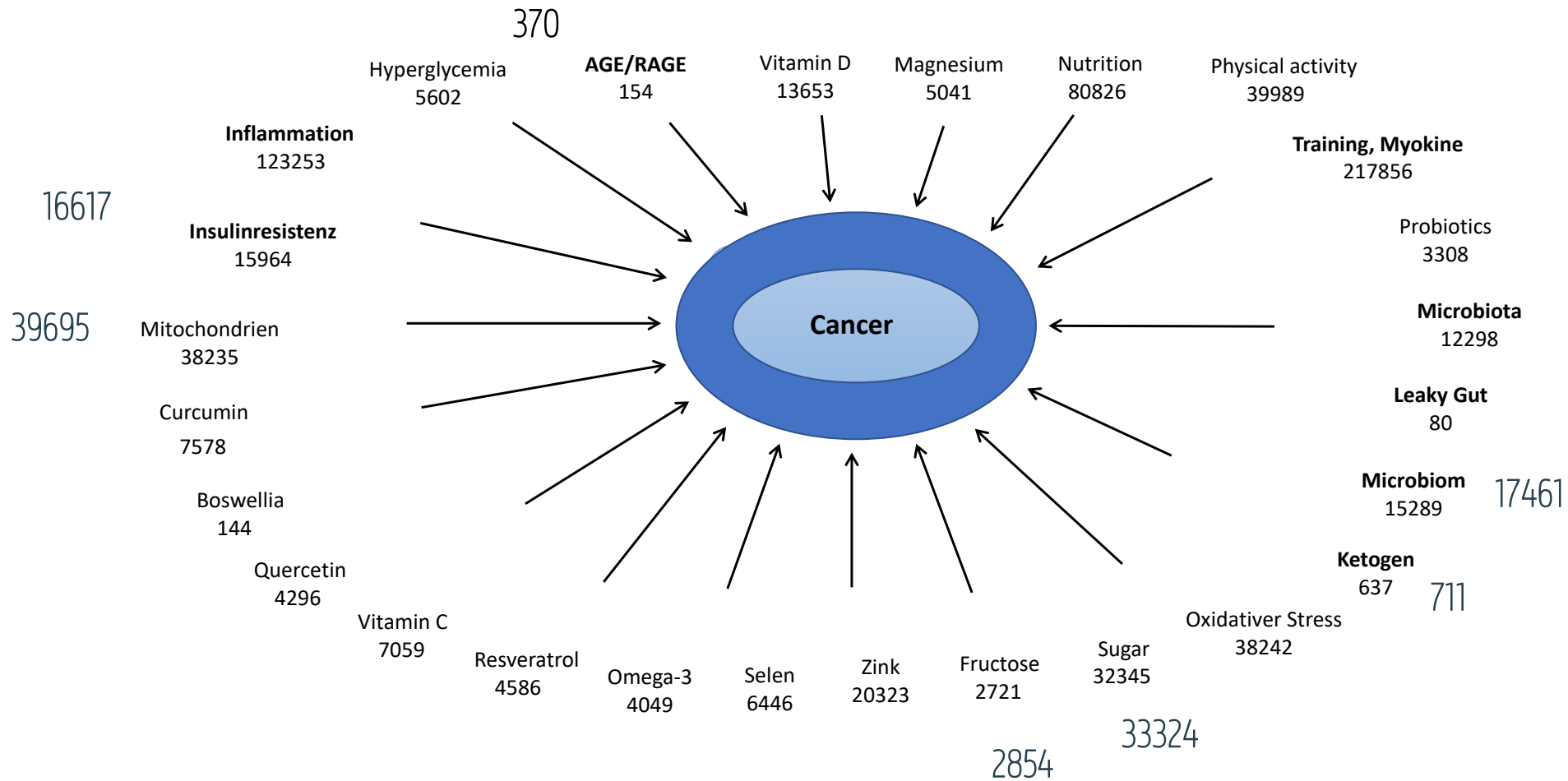


+++

Natural Eating/
 Glycoplan
 Training/ Myokine
 Omega 3
 Butyrat, SCFA
 MCT
 Vitamin C & Vitamin
 D
 Selen, Magnesium,
 Zink
 Carnitin
 Galactose
 Boswellia, Curcumin
 Reishi, Cordyceps
 Ginseng

Zusammenhänge und mögliche Ansätze bei Krebs

Treffer in der medizinischen Datenbank pubmed 12.06.2023
 von „Vielem“ zu „Einem“ und wieder zu „Vielem“



[Cell Metab. 2021 Dec 7; 33\(12\): 2316–2328.](#)

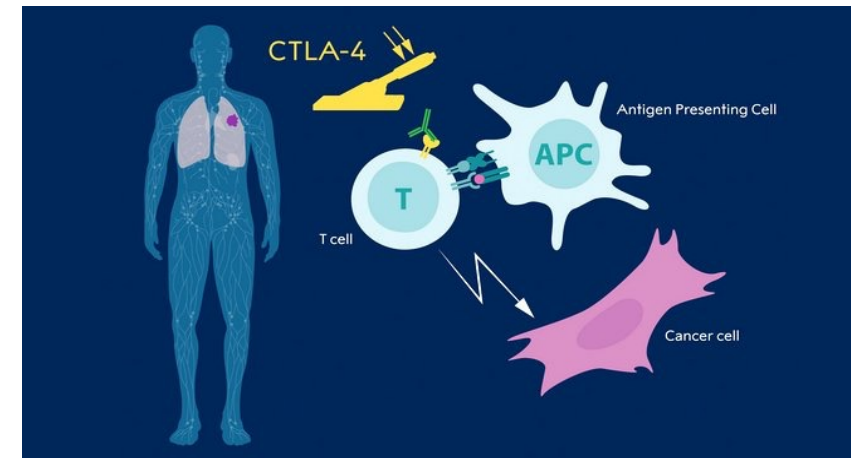
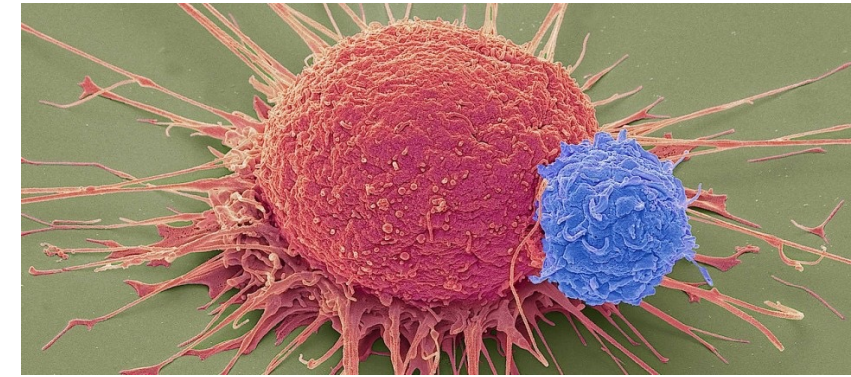
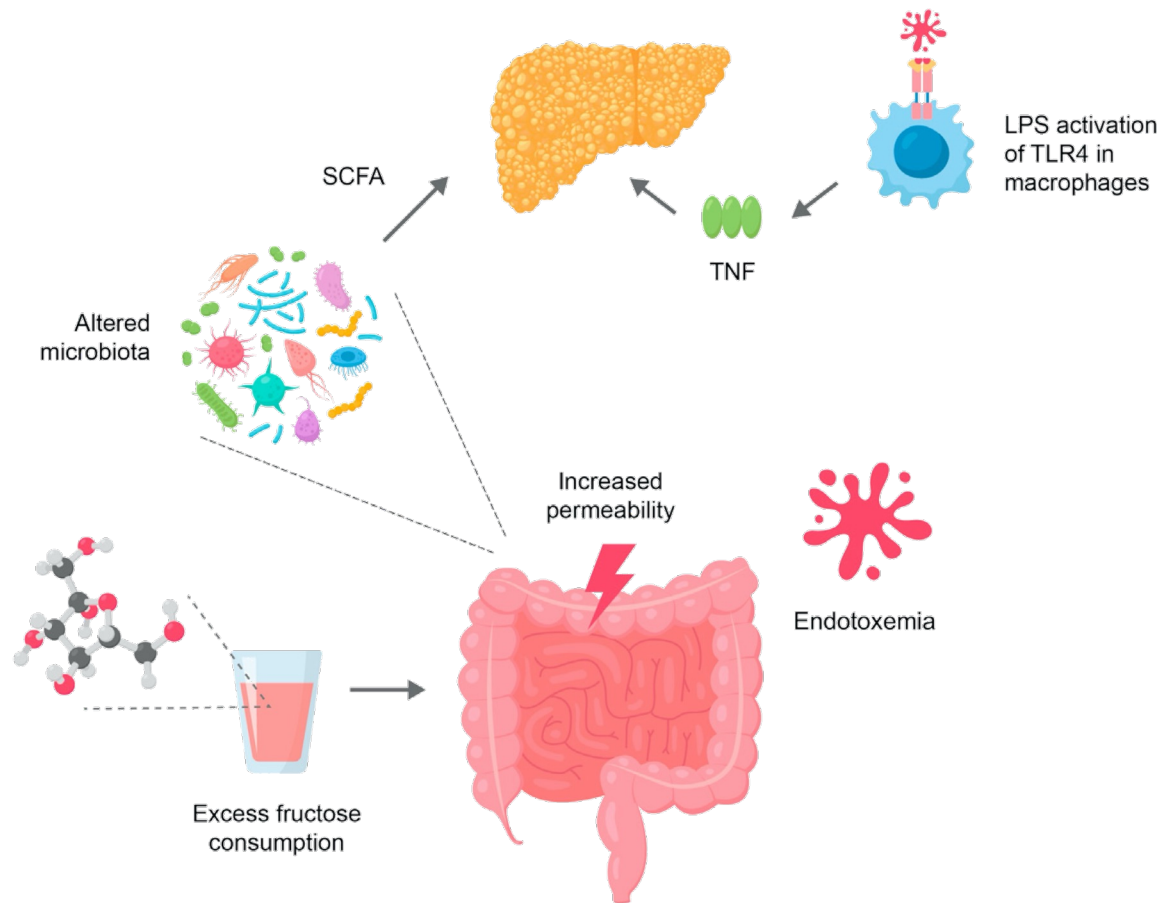
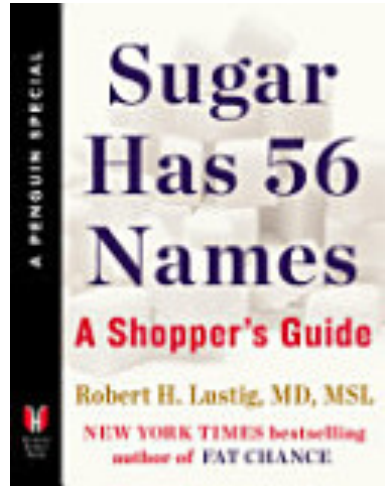
“Sweet death”: Fructose as a metabolic toxin that targets the gut-liver axis

[Mark A. Febbraio](#)^{1,*} and [Michael Karin](#)^{2,*}

[Fructose contributes to the Warburg effect for cancer growth.](#)

Nakagawa T, Lanasma MA, Millan IS, Fini M, Rivard CJ, Sanchez-Lozada LG, Andres-Hernando A, Tolan DR, Johnson RJ.

[Cancer Metab. 2020 Jul 10;8:16.](#)



© Illustrator: Mattias Karlén/
The Nobel Committee for Physiology or Medicine

[Cancer Res. 2021 Jun 1;81\(11\):2824–2832.](#)

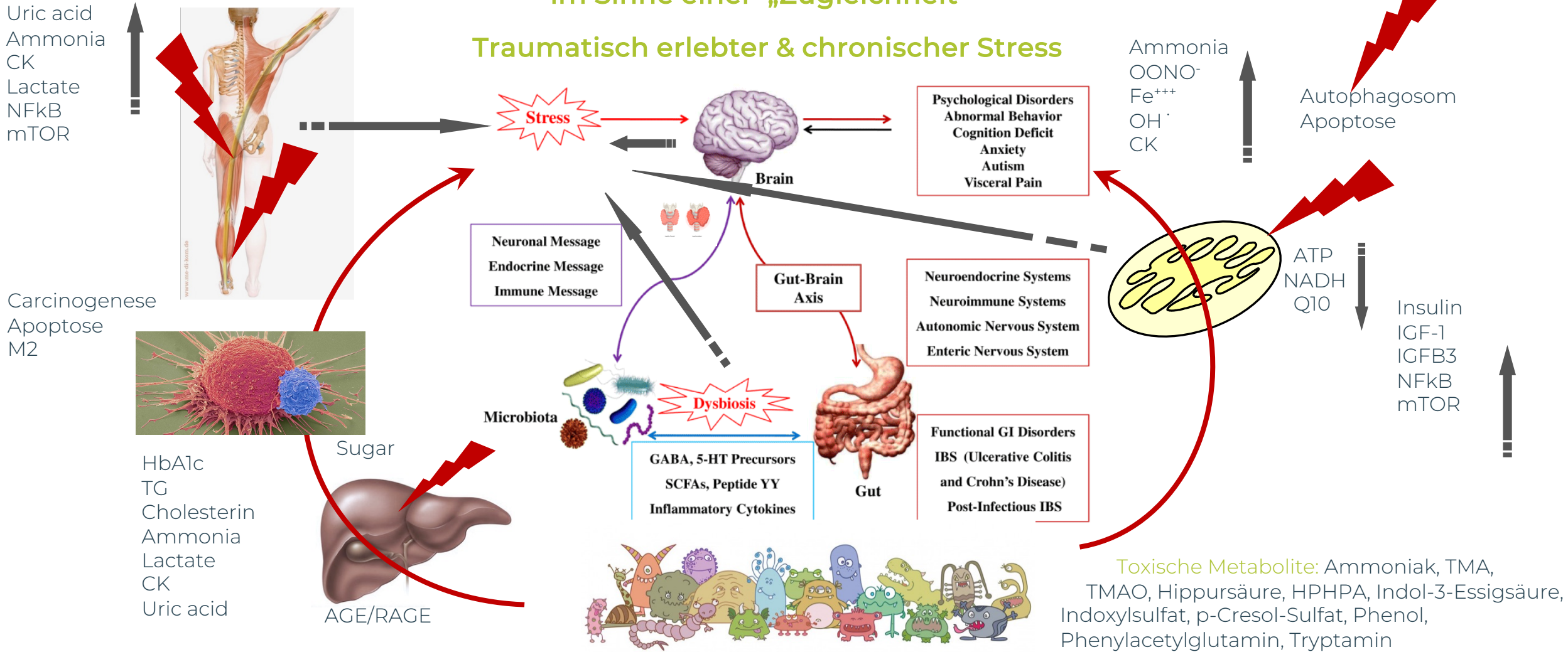
Dietary Fructose Promotes Prostate Cancer Growth

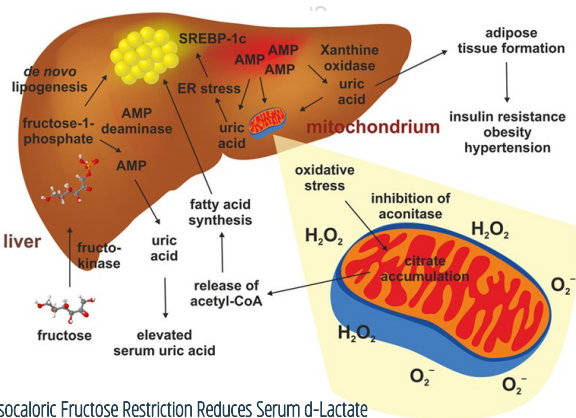
[Daniela V Carreño](#)^{#1}, [Néstor B Corro](#)^{#1}, [Javier F Cerda-Infante](#)^{#2}, [Carolina E Echeverría](#)^{3,4}, [Catalina A Asencio-Barría](#)¹, [Verónica A Torres-Estay](#)⁵, [Gonzalo A Mayorga-Weber](#)^{6,7}, [Pablo A Rojas](#)⁸, [Loreto P Véliz](#)¹, [Pedro A Cisternas](#)^{9,10}, [Viviana P Montecinos](#)², [Ignacio F San Francisco](#)⁸, [Manuel A Varas-Godoy](#)³, [Paula C Sotomayor](#)⁸, [Maite A Castro](#)^{6,7,11}, [Francisco J Nualart](#)¹², [Nibaldo C Inestrosa](#)⁹, [Alejandro S Godoy](#)^{13,14}

„Die FERNSTEUERUNG für unseren Energiestoffwechsel, das Immunsystem, das Nervensystem und die psychische Gesundheit gründet in der Darm-Leber- Muskel-Mitochondrien-Gehirn-Achse.“

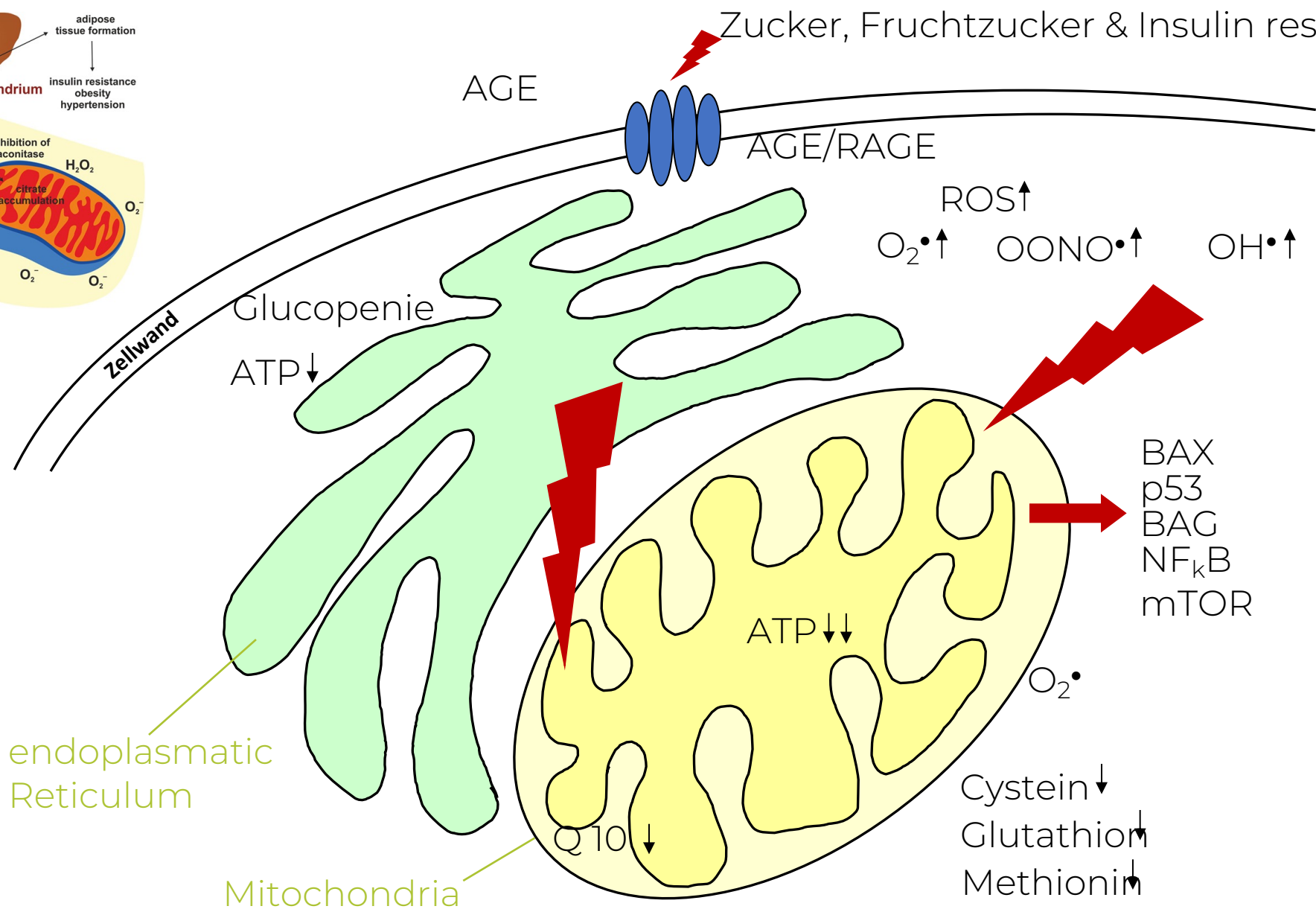
Somatopsychische und Psychosomatische Wege im Sinne einer „Zugleichheit“

Traumatisch erlebter & chronischer Stress





Isocaloric Fructose Restriction Reduces Serum d-Lactate Concentration in Children With Obesity and Metabolic Syndrome
 Ayca Erkin-Cakmak, Yasmin Bains, Russell Caccavello, Susan M Noworolski, Jean-Marc Schwarz, Kathleen Mulligan, Robert H Lustig, Alejandro Gugliucci
 Clin endocrinol Metab. 2019 Jul 1;104(7):3003-3011.



[Mitochondria and Mitochondrial ROS in Cancer: Novel Targets for Anticancer Therapy.](#)

Yang Y, Karakhanova S, Hartwig W, D'Haese JG, Philippov PP, Werner J, Bazhin AV.

J Cell Physiol. 2016 Dec;231(12):2570-81.

[Autophagy, Metabolism, and Cancer.](#)

White E, Mehnert JM, Chan CS.

Clin Cancer Res. 2015 Nov 15;21(22):5037-46. doi: 10.1158/1078-0432.CCR-15-0490. Review.

[Restoration of mitochondria function as a target for cancer therapy.](#)

Bhat TA, Kumar S, Chaudhary AK, Yadav N, Chandra D.

Drug Discov Today. 2015 May;20(5):635-43.

[Mitochondria and cancer.](#)

Wallace DC.

Nat Rev Cancer. 2012 Oct;12(10):685-98. doi: 10.1038/nrc3365. Review.

[Mitochondria and Cancer.](#)

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Mol Cell. 2016 Mar 3;61(5):667-676

[Mitochondria, Bioenergetics and Apoptosis in Cancer.](#)

Burke PJ.

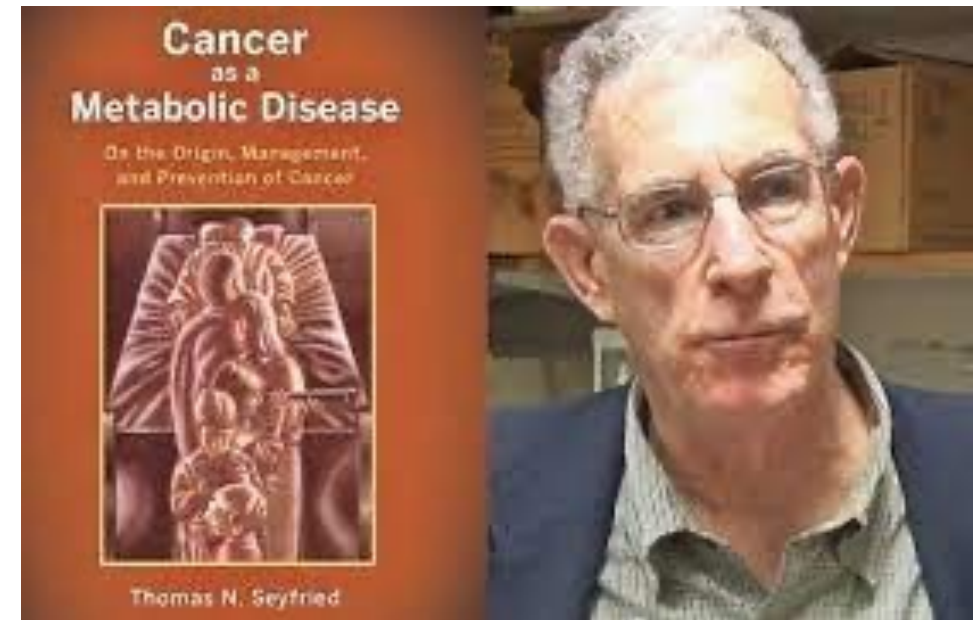
Trends Cancer. 2017 Dec;3(12):857-870

Metabolites. 2021 Aug 25;11(9):572.

Can the Mitochondrial Metabolic Theory Explain Better the Origin and Management of Cancer than Can the Somatic Mutation Theory?

[Thomas N Seyfried](#)¹, [Christos Chinopoulos](#)²

217 erstklassige Publikationen
Prof. Dr. med. Thomas N. Seyfried



BOSTON COLLEGE

Morrissey College of Arts and Sciences

EBioMedicine. 2020 Sep;59:102943.

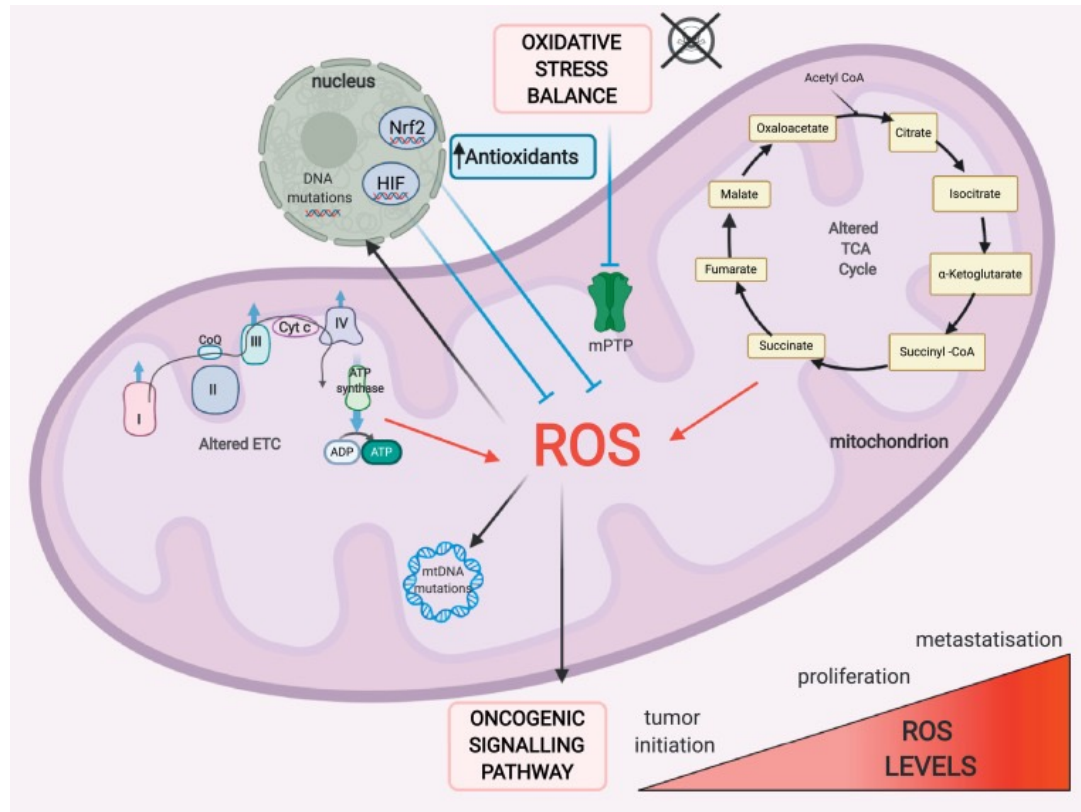
Cancer metabolism and mitochondria: Finding novel mechanisms to fight tumours

Sonia Missirolj¹, Mariasole Perrone¹, Ilaria Genovese¹, Paolo Pinton¹, Carlotta Giorgi²

Metabolites. 2021 Aug 25;11(9):572.

Can the Mitochondrial Metabolic Theory Explain Better the Origin and Management of Cancer than Can the Somatic Mutation Theory?

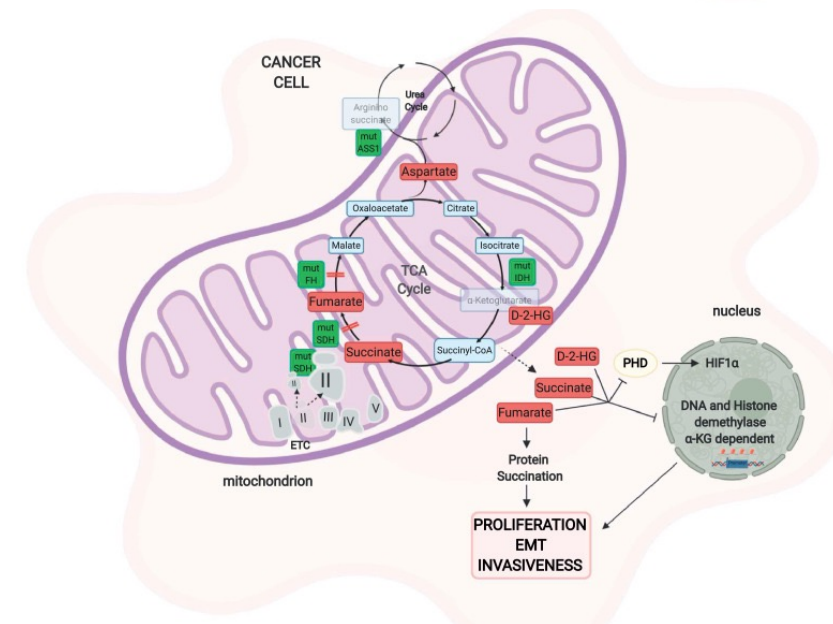
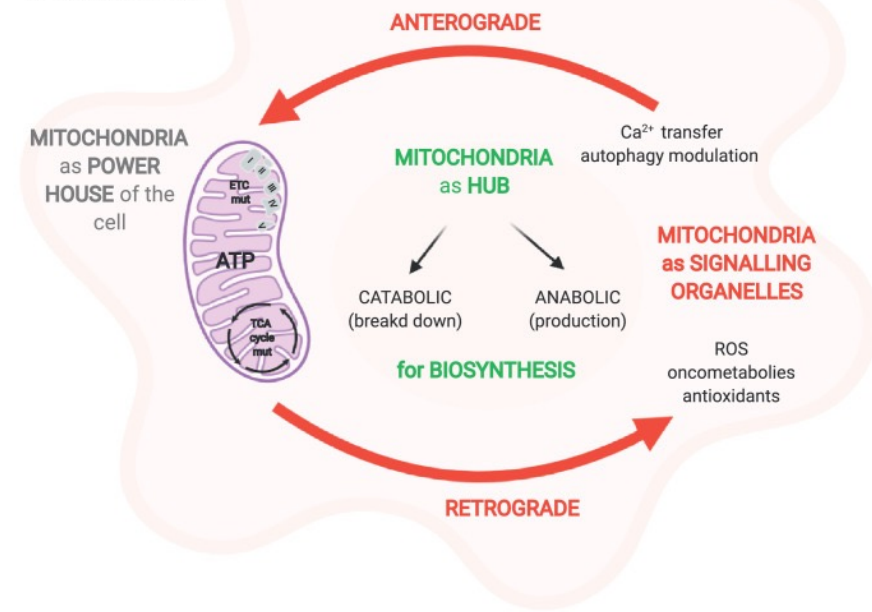
Thomas N Seyfried¹, Christos Chinopoulos²



Cancer cell

altered mitochondrial metabolic pathways

↑ Oncogenes –
↓ Tumorsuppressors
↓ Oxygen
↓ Glucose



Zucker weg: Übersicht über die Datenlage zur Ketogenen Ernährung:

Schmidt et al. *Nutrition & Metabolism* 2011, **8**:54
<http://www.nutritionandmetabolism.com/content/8/1/54>



RESEARCH

Open Access

Effects of a ketogenic diet on the quality of life in 16 patients with advanced cancer: A pilot trial

Melanie Schmidt, Natja Metzger, Michael Schwab, Ingrid Strauss and Ulrike Kämmerer*

Kämmerer and Kämmerer *Nutrition & Metabolism* 2011, **8**:75
<http://www.nutritionandmetabolism.com/content/8/1/75>



REVIEW

Open Access

Is there a role for carbohydrate restriction in the treatment and prevention of cancer?

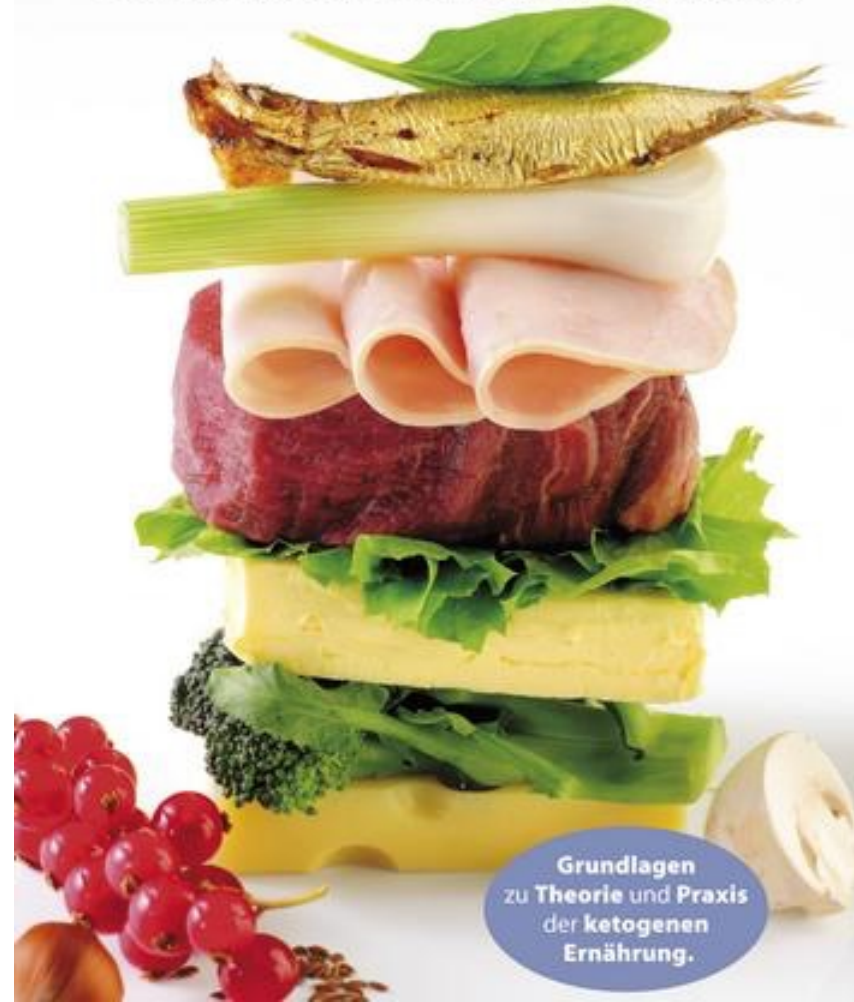
Rainer J. Klement* and Ulrike Kämmerer*

Prof. Ulrike Kämmerer
Dr. Christina Schlatterer | Dr. Gerd Knoll

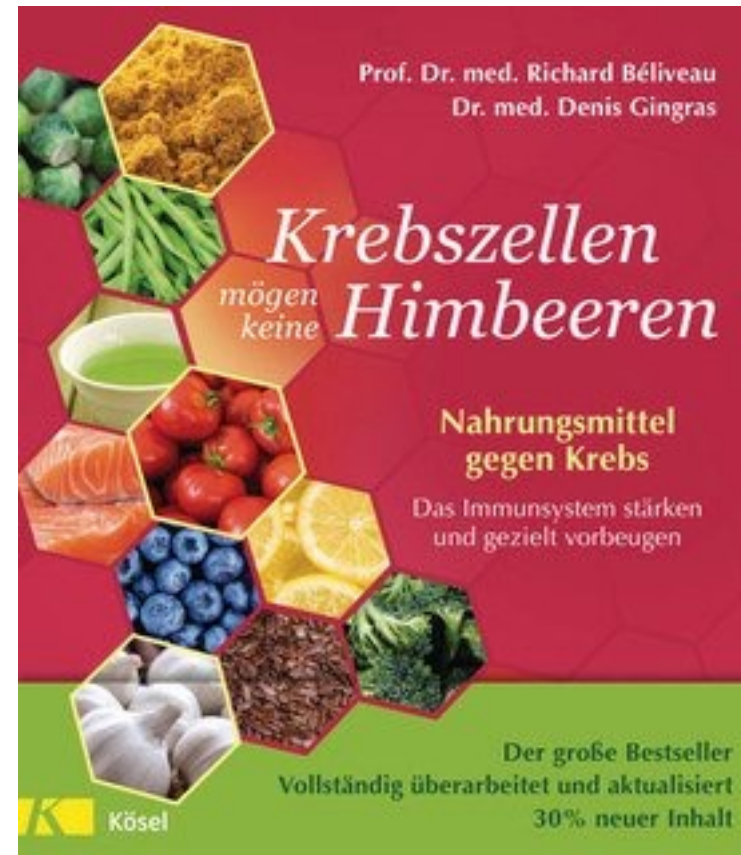
systemed

Krebszellen lieben Zucker – Patienten brauchen Fett.

Gezielt essen für mehr Kraft und
Lebensqualität bei Krebserkrankungen.



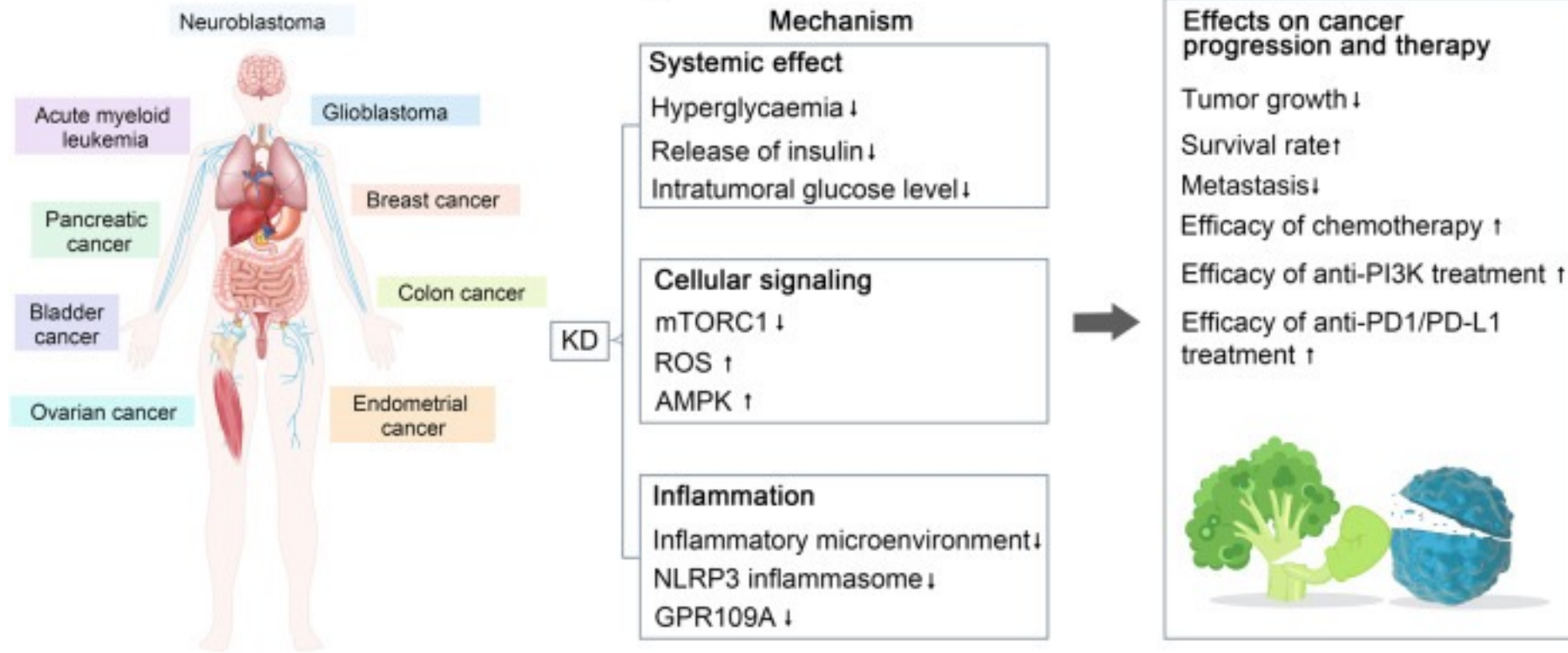
Grundlagen
zu Theorie und Praxis
der ketogenen
Ernährung.



Biochim Biophys Acta Rev Cancer. 2024 Jan;1879(1):189063.
Nutrition and dietary restrictions in cancer prevention
[Amrendra Mishra](#)¹, [Giacomo Giuliani](#)¹, [Valter D Longo](#)²

Am J Physiol Cell Physiol. 2024 Jan 8.
Ketone Bodies in Cell Physiology and Cancer
[Giacomo Giuliani](#)¹, [Valter D Longo](#)²

Ketogenic diet and cancer



Ketogenic diet for human diseases: the underlying mechanisms and potential for clinical implementations

• [Huiyuan Zhu](#), [Dexi Bi](#), [Youhua Zhang](#), [Cheng Kong](#), [Jiahao Du](#), [Xiawei Wu](#), [Qing Wei](#) & [Huanlong Qin](#)
Nature. Signal Transduction and Targeted Therapy volume 7, Article number: 11 (2022)

Cureus. 2022 Aug 2;14(8):e27603.

Restricted Ketogenic Diet Therapy for Primary Lung Cancer With Metastasis to the Brain: A Case Report

[Athanasios E Evangelidou](#)¹, [Martha G Spilioti](#)², [Despoina Vassilakou](#)³, [Fotini Goutsaridou](#)⁴, [Thomas N Seyfried](#)⁵

Crit Rev Food Sci Nutr. 2022;62(7):1800-1821.

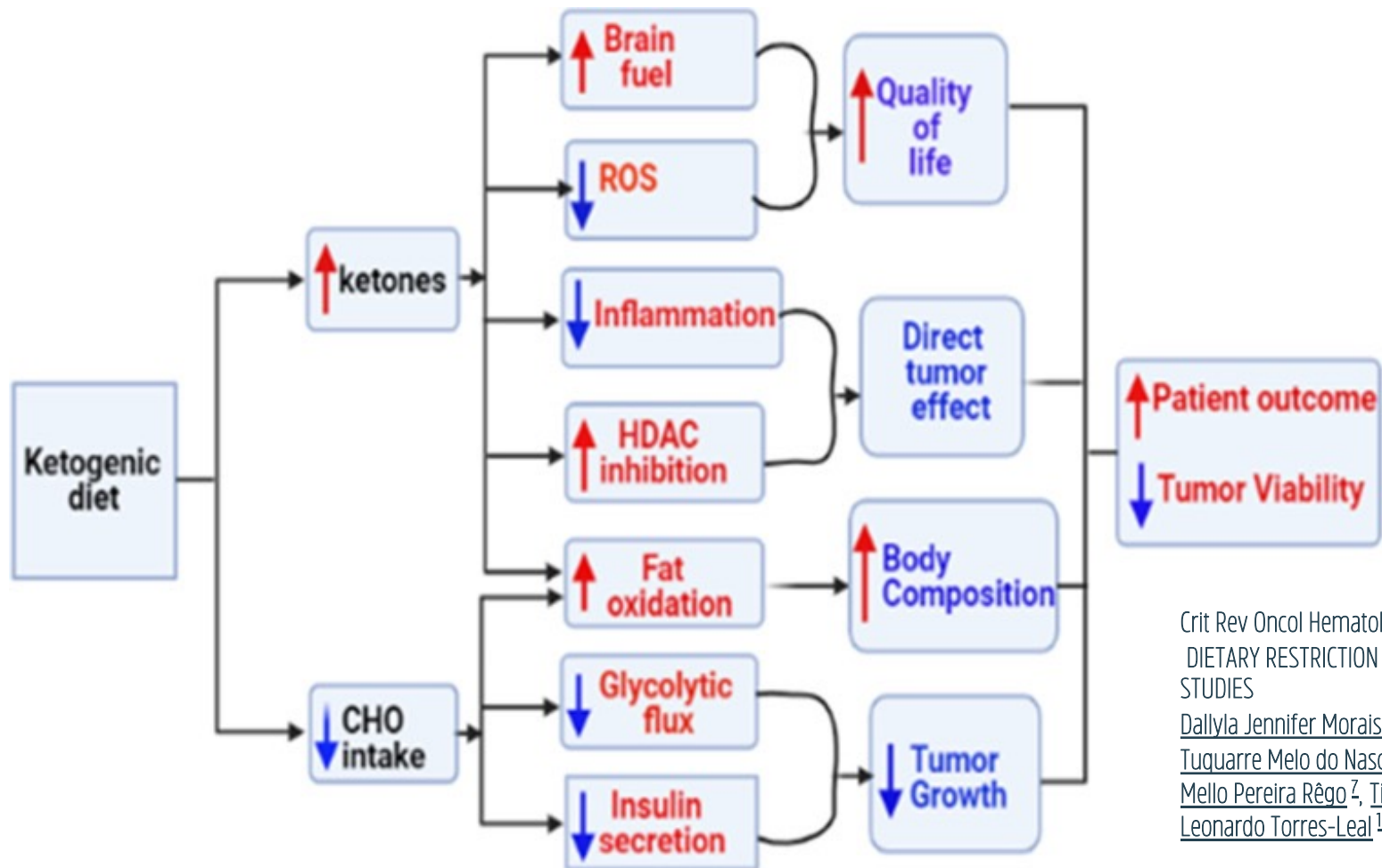
Could ketogenic diet "starve" cancer? Emerging evidence

Luigi Barrea^{1,2}, Massimiliano Caprio^{3,4}, Dario Tuccinardi⁵, Eleonora Moriconi³, Laura Di Renzo⁶, Giovanna Muscogiuri^{1,2}, Annamaria Colao^{1,2,7}, Silvia Savastano^{1,2}; Obesity Programs of nutrition, Education, Research and Assessment (OPERA) group

Cancer Manag Res. 2021 Dec 14;13:9147-9155.

Ketogenic Diets and their Therapeutic Potential on Breast Cancer: A Systemic Review

Mohammed Jamal¹, Tewodros Shibabaw Molla¹, Tadesse Asmamaw Dejenie¹



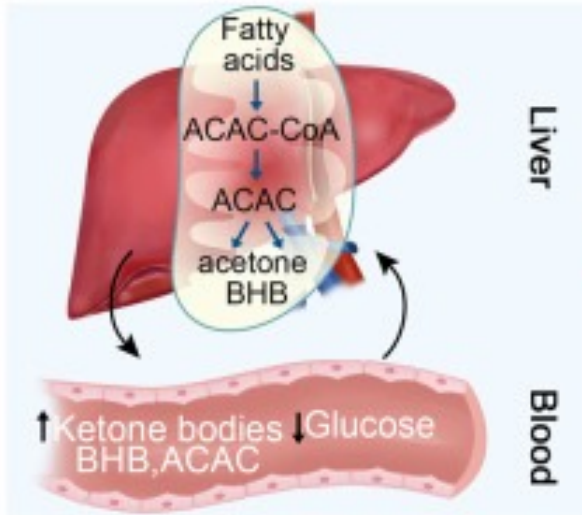
Crit Rev Oncol Hematol. 2024 Feb 8;104:264.

DIETARY RESTRICTION AND HEPATIC CANCER: SYSTEMATIC REVIEW AND META-ANALYSIS OF ANIMAL STUDIES

Dallyla Jennifer Morais de Sousa¹, Kynnara Gabriella Feitosa de Oliveira², Irislene Costa Pereira³, Glauto Tuquarre Melo do Nascimento⁴, Clenio Oliveira Barrense⁵, Jorddam Almondes Martins⁶, Beatriz de Mello Pereira Rêgo⁷, Tiago Eugênio Oliveira da Silva⁸, Felipe Cavalcanti Carneiro da Silva⁹, Francisco Leonardo Torres-Leal¹⁰

Ketogenic diet and metabolism

a



FA, and Ketone bodies ↑

Cholesterol ↓

TGs ↓

HDL ↑

Size and volume of LDL ↑

Fibroblast growth factor 1 ↓

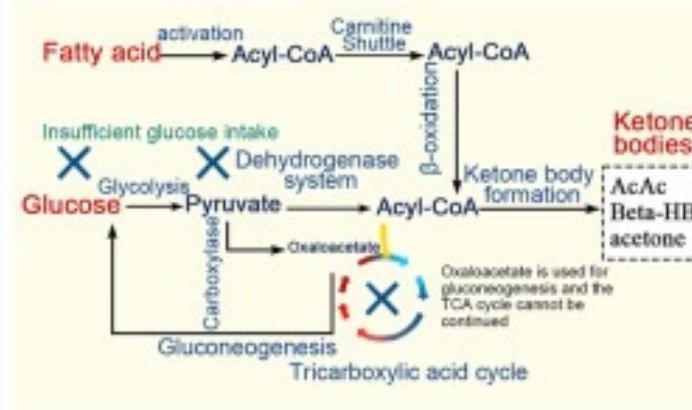
HMG-CoA reductase ↑

PPAR α ↑

Whole-body fatty acid oxidation ↑

Liver ketogenesis ↑

b



Glucose ↓

β -HB, AcAc ↑

Insulin sensitivity ↑

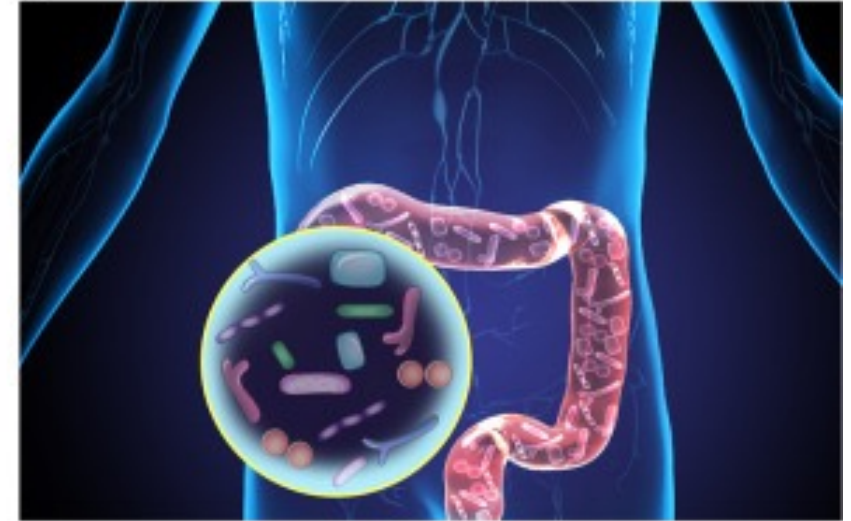
Mitochondrial oxidation ATP ↑

The ratio of insulin to glucagon ↓

Risk of type 2 diabetes ↓

c

Ketogenic diet and gut microbiota



Composition and diversity

Bifidobacteria ↓

Akkermansia muciniphila ↑

Desulfovibrio ↓

Parabacteroides ↑

Turicibacter ↓

Lactobacillus ↑

Escherichia ↓

Ruminococcaceae ↑

Salmonella ↓

Bacteroidetes ↑

Vibrio ↓

Roseburia ↑

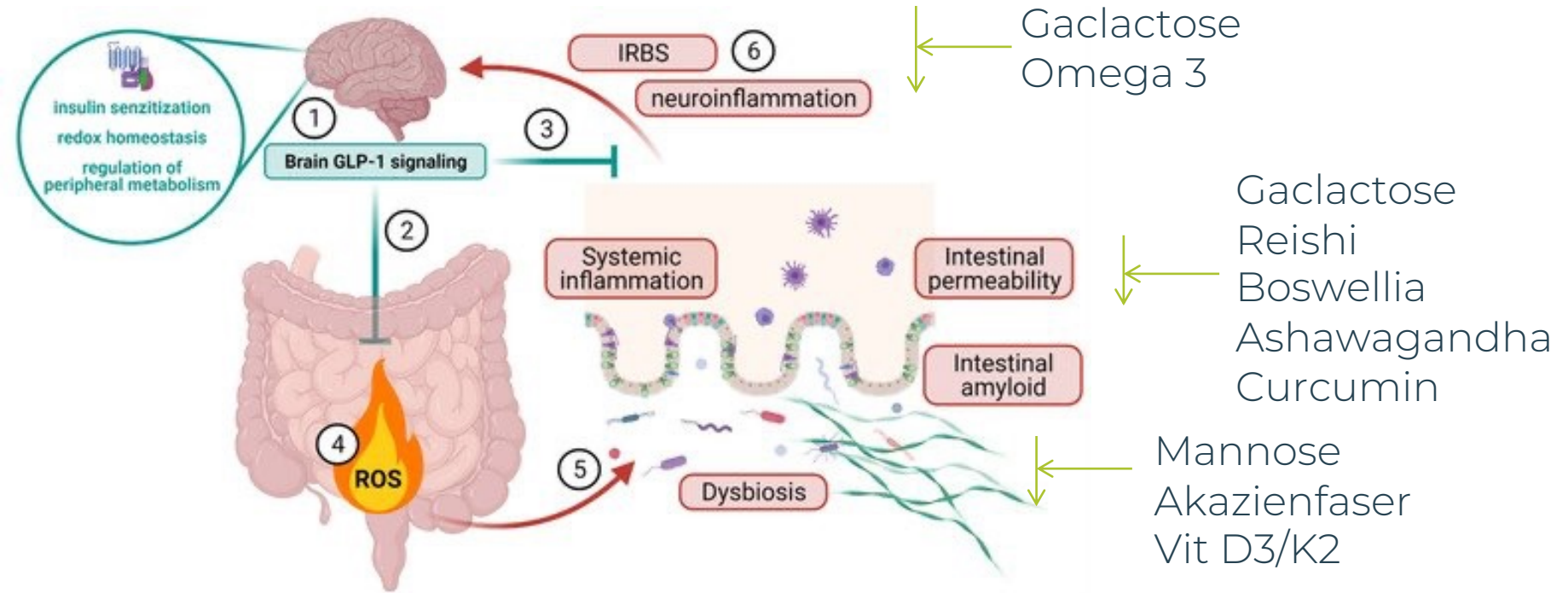
Overall diversity ↓

Ketogenic diet for human diseases: the underlying mechanisms and potential for clinical implementations

•Huiyuan Zhu, Dexi Bi, Youhua Zhang, Cheng Kong, Jiahao Du, Xiawei Wu, Qing Wei & Huanlong Qin

Nature. Signal Transduction and Targeted Therapy volume 7, Article number: 11 (2022)

BDNF
 GDNF
 AMPK
 PGC1- α
 Nrf1,2
 Sirtuine



Science . 2021 Mar 26;371(6536):eabc4552.

The microbiome and human cancer

[Gregory D Sepich-Poore](#)¹, [Laurence Zitvogel](#)^{2, 3, 4, 5}, [Ravid Straussman](#)⁶, [Jeff Hasty](#)^{1, 7, 8}, [Jennifer A Wargo](#)^{9, 10}, [Rob Knight](#)^{11, 12, 13}

Cancer Epidemiol Biomarkers Prev . 2024 Jan 9;33(1):9-19.

The Breast Microbiome in Breast Cancer Risk and Progression: A Narrative Review

[Brandilyn A Peters](#)¹, [Libusha Kelly](#)², [Tao Wang](#)¹, [Olivier Loudig](#)³, [Thomas E Rohan](#)¹

Molecular Nutrition & Food Research 27 August 2021

Is Galactose a Hormetic Sugar? An Exploratory Study of the Rat Hippocampal Redox Regulatory Network

[Jan Homolak](#), [Ana Babic Perhoc](#), [Ana Knezovic](#), [Ivan Kodvanj](#), [Davor Virag](#), [Jelena Osmanovic Barilar](#), [Peter Riederer](#), [Melita Salkovic-Petrisic](#)

Protein Cell . 2021 May;12(5):426-435.

Unexpected guests in the tumor microenvironment: microbiome in cancer

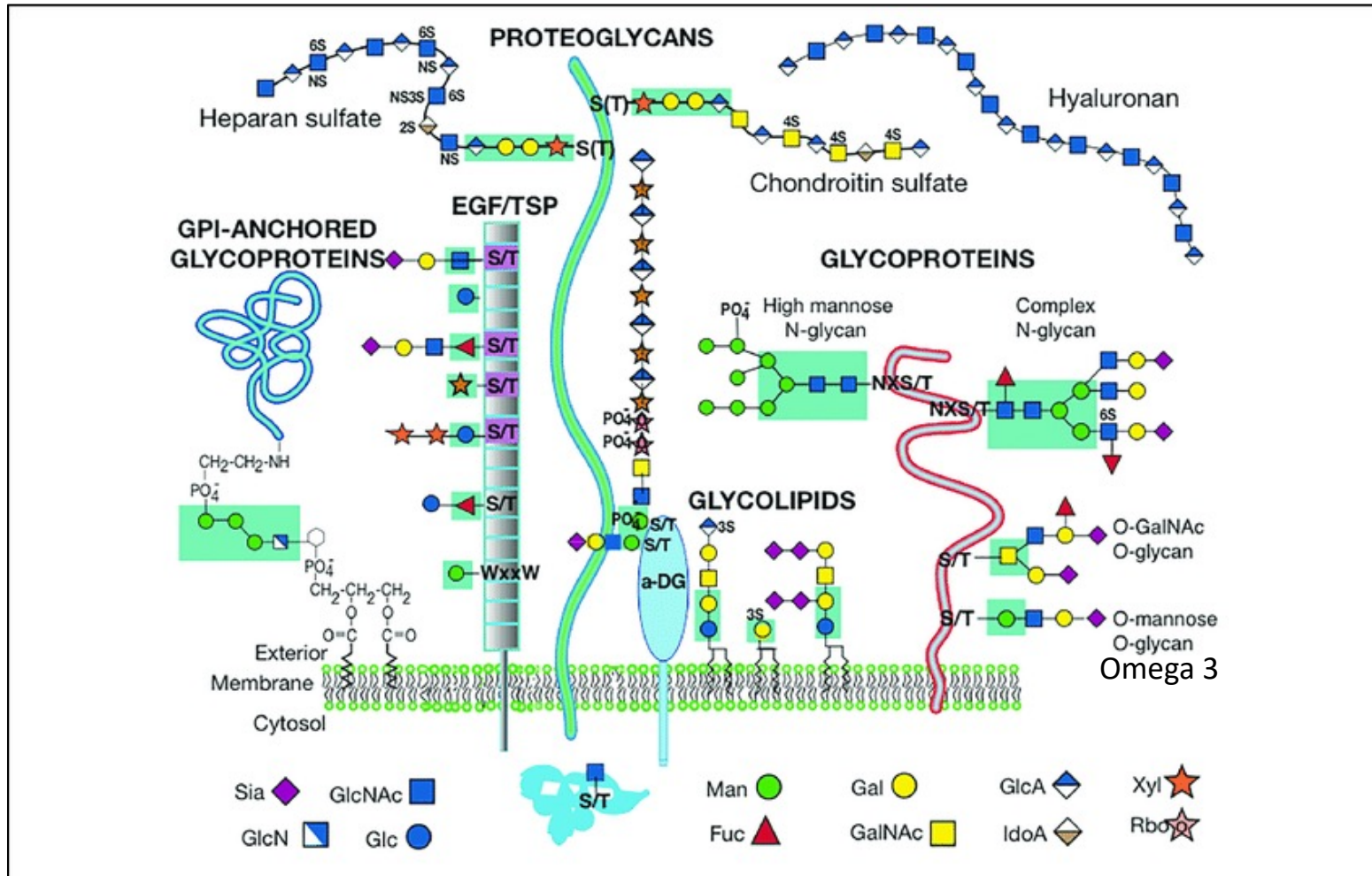
[Abigail Wong-Rolle](#)^{# 1}, [Haohan Karen Wei](#)^{# 2}, [Chen Zhao](#)³, [Chengcheng Jin](#)⁴

Neuropharmacology. 2018 Jun;135:48-62.

Glucagon-like peptide-1 mediates effects of oral galactose in streptozotocin-induced rat model of sporadic Alzheimer's disease

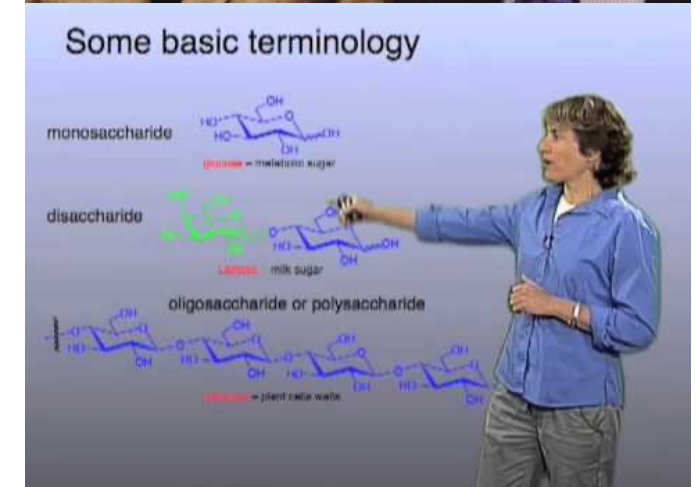
[Ana Knezovic](#)¹, [Jelena Osmanovic Barilar](#)¹, [Ana Babic](#)¹, [Robert Bagaric](#)², [Vladimir Farkas](#)², [Peter Riederer](#)³, [Melita Salkovic-Petrisic](#)⁴





Roles for Golgi Glycans in Oogenesis and Spermatogenesis
 Ayodele Akintayo and Pamela Stanley*
 Department of Cell Biology, Albert Einstein College of Medicine, New York, NY, United States

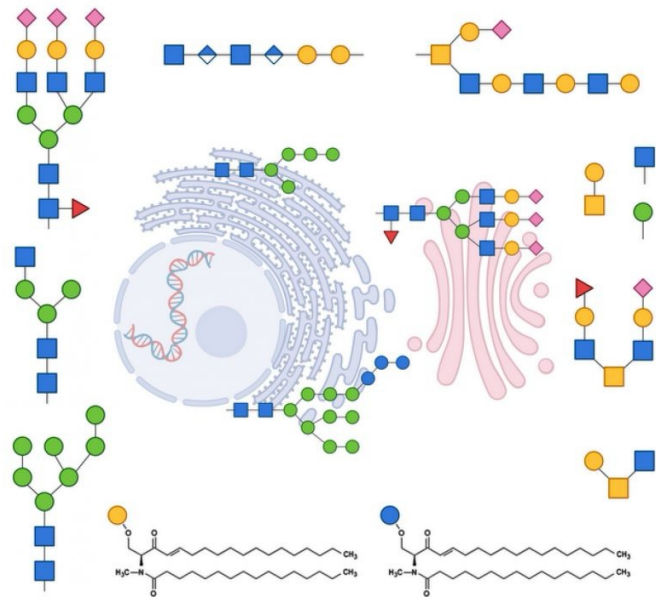
published: 07 June 2019 doi: 10.3389/fcell.2019.00098



Cell Surface Glycans in Mammals. The diagram depicts one or more glycans from each class of mammalian glycan. The diagram is modified from Figure in Stanley (2016) with permission. Sugar symbols are according to the Symbol Nomenclature for Glycans (Varki et al., 2015).

GLYCOME

The Hidden Code in Biology



Dipak K. Banerjee, Ph.D.
Editor

BIOCHEMISTRY RESEARCH TRENDS

NOVA

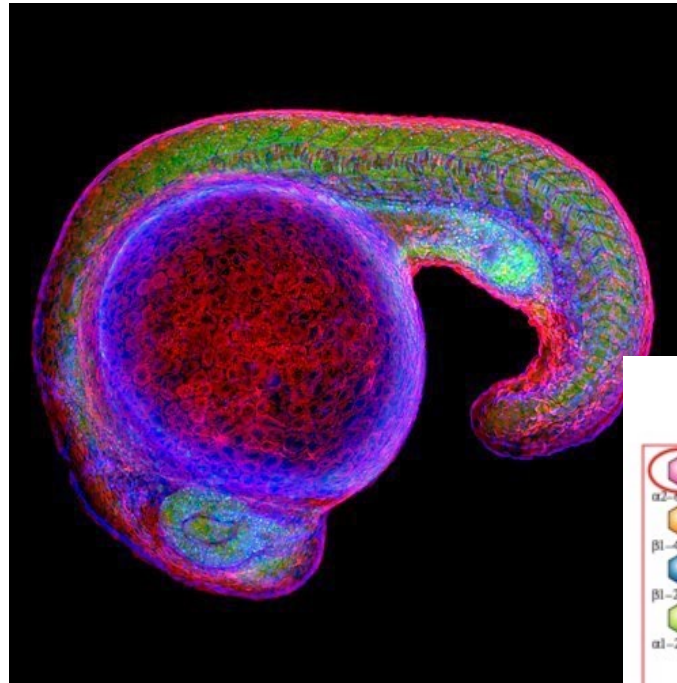
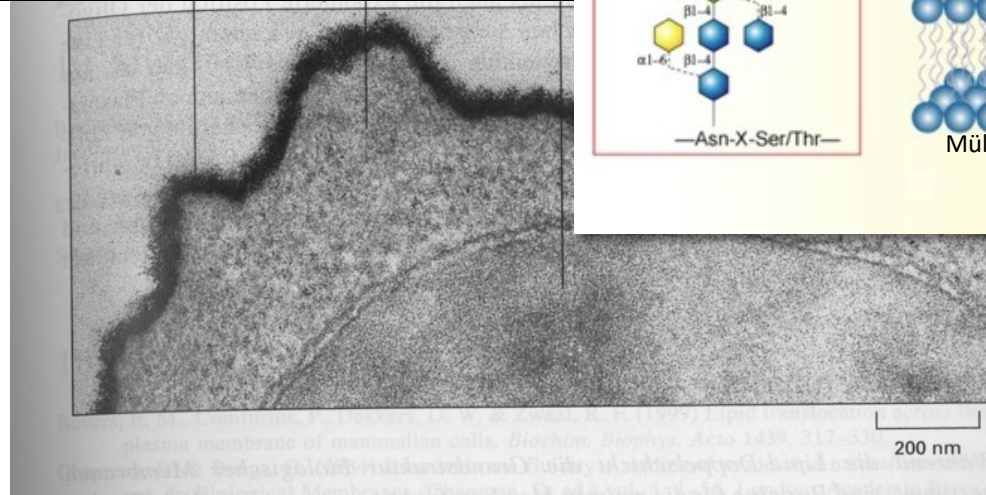
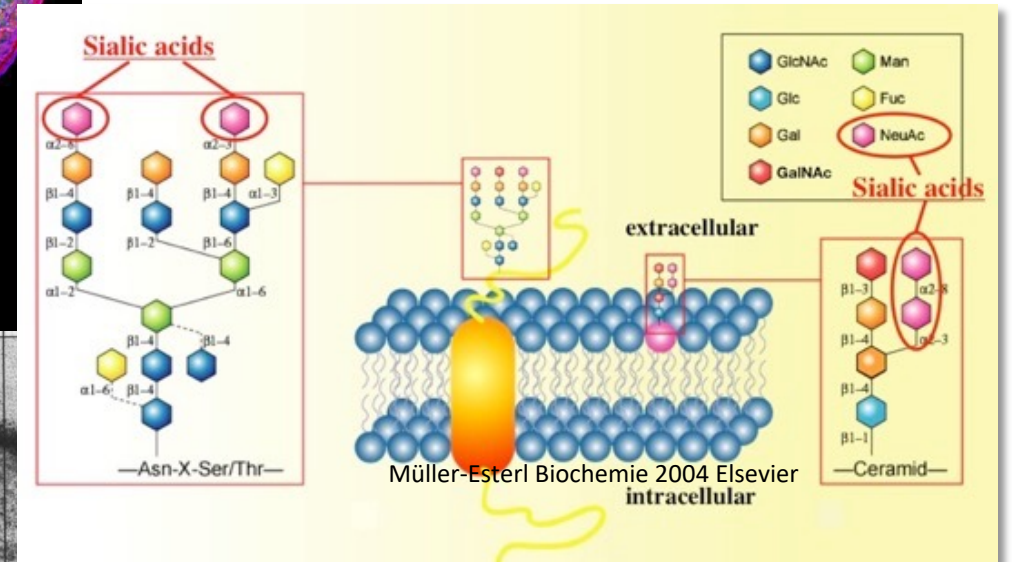


Image courtesy of Carolyn Bertozzi, Scott Laughlin, and Jeremy Baskin



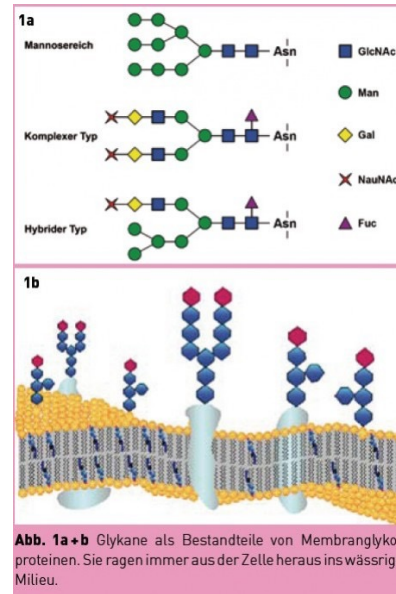
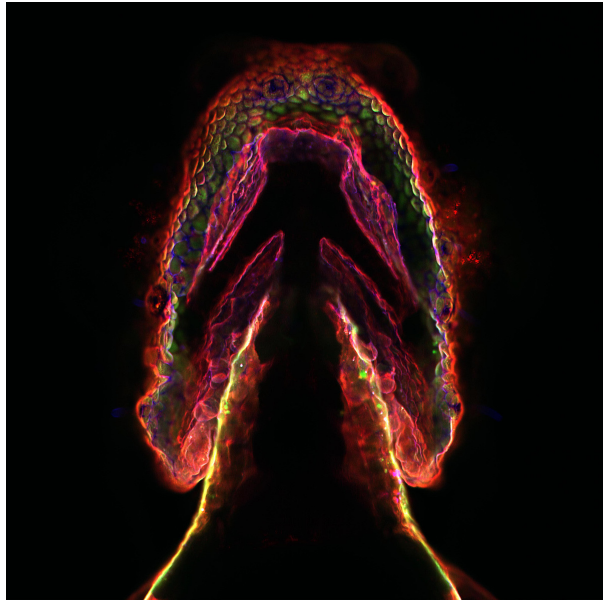
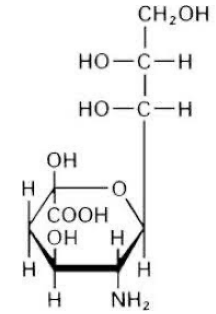
Müller-Esterl Biochemie 2004 Elsevier



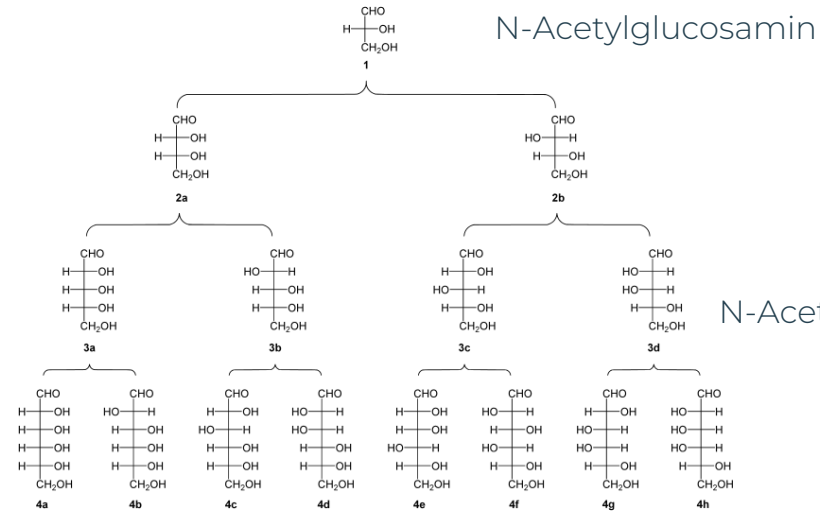
DER Zuckercode und essentielle Bausteine für Gesundheit und ein langes Leben



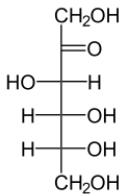
D-Sialinsäure, auch N-Acetylneuraminsäure, ein C₉-Ketozyucker, spielt bei der Zell-Zell-Erkennung in Glycokonjugaten eine Rolle



Werner Reutter in labor&more

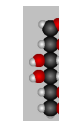
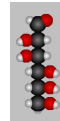


D-Fructose



„Stammbaum“ der D-Aldosen. Durch Anhängen von CH-OH-Gruppen verlängert man das Grundgerüst, so dass sich weitere Zucker ableiten lassen (von Triosen mit drei C- bis Hexosen mit sechs C-Atomen). Dabei ist die Drehrichtung polarisierten Lichtes mit (+) bzw. (-) angegeben.

- (1) D-(+)-Glycerinaldehyd;
 (2a) D-(-)-Erythrose; (2b) D-(-)-Threose;
 (3a) D-(-)-Ribose; (3b) D-(-)-Arabinose; (3c) D-(+)-Xylose;
 (4a) D-(+)-Allose; (4b) D-(+)-Altrose; (4c) D-(+)-Glucose; (4d) D-(+)-Mannose; (4e) D-(-)-Gulose; (4f) D-(-)-Idose; (4g) D-(+)-Galactose; (4h) D-(+)-Talose

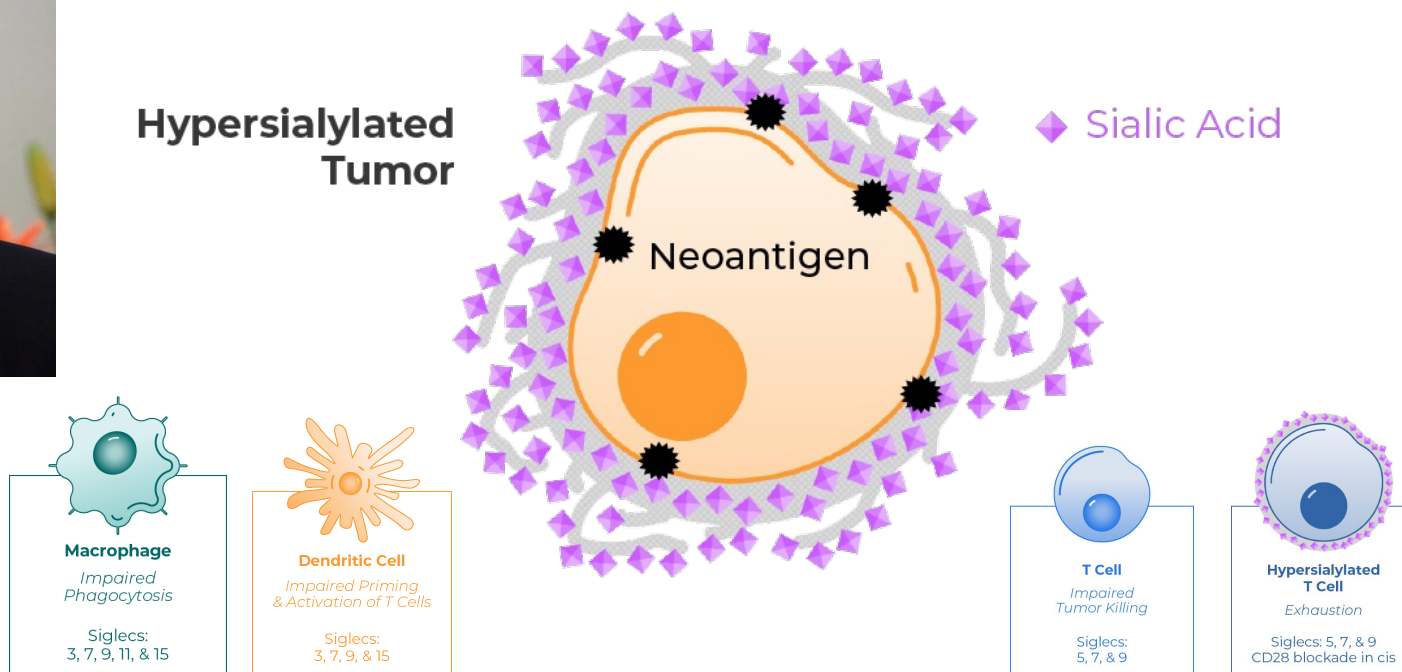


The Glyco-Immunology Revolution: **Dr. Carolyn Bertozzi** was awarded the **2022 Nobel Prize in Chemistry** for the invention of **bioorthogonal chemistry**

Technological advances have revealed the vital role played by cell surface glycans in regulating the immune response. New research suggests that the upregulation of sialoglycans – complex sugar chains that terminate with a sialic acid and coat cell surfaces – suppresses the activation of the immune system in more than 50% of cancer patients. Both tumor cells and immune cells can become hypersialylated, contributing to immune evasion in cancer. Dysregulated glycans are also linked to several inflammatory disorders including rheumatoid arthritis, idiopathic pulmonary fibrosis, and autoimmune vasculitis.

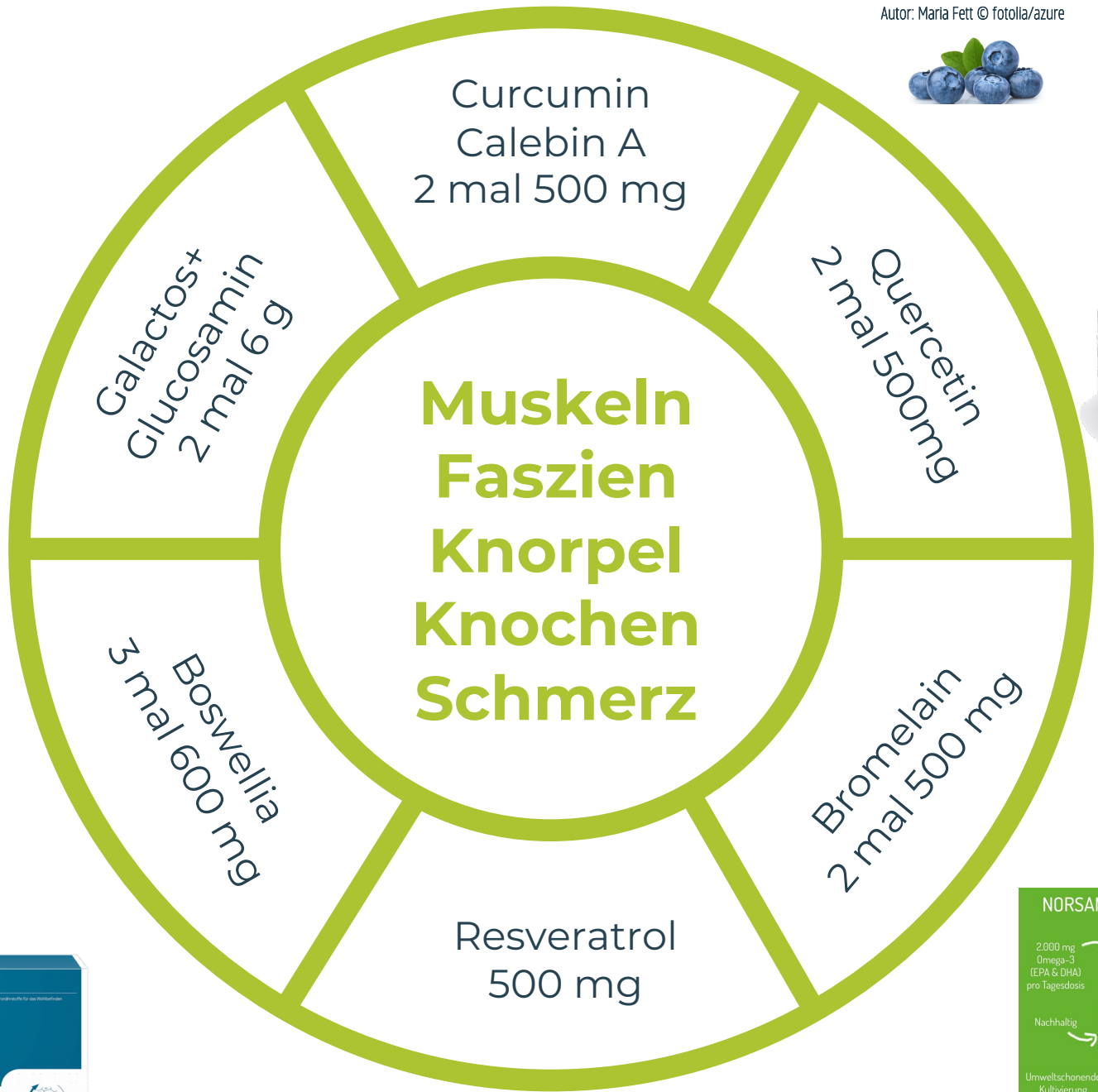
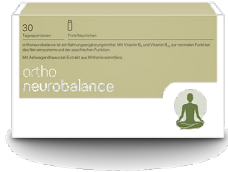


Sialoglycan-Mediated Immune Suppression in Cancer



Antientzündliche & Epigenetisch aktive Krebschutz Phytopharmaka

- Boswellia
- Curcumin
- Resveratrol
- Myrobalan/Galactose
- Artimisia
- Quercetin
- Cordyceps
- Ashwagandha
- Melatonin
- Spermidin
- Vitamin D/VDR
- Omega 3
- Sandorn/Gojee/Vitamin C
- Indol 3-Carabinol
- Ginseng
- Proteine (Ketoplastisch)



Medical Tribune, Heidelbeeren senken wohl die Krankheitsaktivität
Autor: Maria Fett © fotolia/azure



NORSAN Omega-3 Vegan

- 2000 mg Omega-3 (EPA & DHA) pro Tagesdosis
- 100% vegan
- EPA: 609 mg
- DHA: 1158 mg
- Nachhaltig
- Umweltschonende Kultivierung
- Taglich nur 1 TL

Nutr Cancer . 2024;76(1):1-16.

The Effects of Omega-3 Fatty Acids Supplementation on Inflammatory Factors in Cancer Patients: A Systematic Review and Dose-Response Meta-Analysis of Randomized Clinical Trials

[Reza Amiri Khosroshahi](#)¹, [Mohammad Heidari Sevedmahalle](#)², [Sheida Zeraattalab-Motlagh](#)², [Laleh Fakhr](#)^{3,4}, [Simon Wilkins](#)⁵, [Hamed Mohammadi](#)^{1,6}

medRxiv . 2024 Jan 22:2024.01.21.24301568.

Associations of plasma omega-6 and omega-3 fatty acids with overall and 19 site-specific cancers: a population-based cohort study in UK Biobank

[Yuchen Zhang](#), [Yitang Sun](#), [Suhang Song](#), [Nikhil K Khankari](#), [J Thomas Brenna](#), [Ye Shen](#), [Kaixiong Ye](#)

Curr Top Med Chem . 2024;24(1):45-59.

n-3 PUFAs Show Promise as Adjuvants in Chemotherapy, Enhancing their Efficacy while Safeguarding Hematopoiesis and Promoting Bone Generation

[Pradnya Gurav](#)¹, [Suraj Garad](#)¹, [Kedar R Nirmala](#)¹

Ann Surg . 2024 Mar 1;279(3):419-428.

Impact of Perioperative Immunonutrition on Postoperative Outcomes for Patients Undergoing Head and Neck or Gastrointestinal Cancer Surgeries: A Systematic Review and Meta-analysis of Randomized Controlled Trials

[Ryota Matsui](#)^{1,2}, [Masano Sagawa](#)^{1,3}, [Akihiko Sano](#)^{1,4}, [Makoto Sakai](#)^{1,4}, [Shin-Ichiro Hiraoka](#)^{1,5}, [Isao Tabei](#)^{1,6}, [Takayuki Imai](#)^{1,7}, [Hideo Matsumoto](#)^{1,8}, [Seiji Onogawa](#)^{1,9}, [Norihiro Sonoji](#)^{1,10}, [Shige-yuki Nagata](#)^{1,11}, [Ryo Ogawa](#)^{1,12}, [Shigeki Wakiyama](#)^{1,13}, [Yasuhiro Miyazaki](#)^{1,14}, [Koshi Kumagai](#)^{1,2}, [Rie Tsutsumi](#)^{1,15}, [Takehiro Okabayashi](#)^{1,16}, [Yu Uneno](#)^{1,17}, [Naoki Higashibeppu](#)^{1,18}, [Joji Kotani](#)^{1,19}

BMC Cancer . 2024 Feb 3;24(1):168.

Study protocol: fish oil supplement in prevention of oxaliplatin-induced peripheral neuropathy in adjuvant colorectal cancer patients - a randomized controlled trial. (OxaNeuro)

[Nina Lykkegaard Gehr](#)^{1,2}, [Páll Karlsson](#)³, [Signe Timm](#)⁴, [Signe Christensen](#)⁵, [Christian Andreas Hvid](#)⁶, [Jana Peric](#)⁷, [Torben Frøstrup Hansen](#)⁴, [Lotte Lauritzen](#)⁸, [Nanna Brix Finnerup](#)⁴, [Lise Ventzel](#)⁴

Nutrients . 2019 Apr 26;11(5):945.

Protective Effects of Omega-3 Fatty Acids in Cancer-Related Complications

[Raquel D S Freitas](#)^{1,2}, [Maria M Campos](#)^{3,4,5}

Nutr Cancer . 2021;73(4):541-561.

Omega-3 Polyunsaturated Fatty Acids and Lung Cancer: nutrition or Pharmacology?

[Owen M Vega](#)¹, [Shaheen Abkenari](#)¹, [Zhen Tong](#)¹, [Austin Tedman](#)¹, [Sara Huerta-Yepe](#)^{1,2}

Clin Nutr . 2022 Aug;41(8):1798-1807.

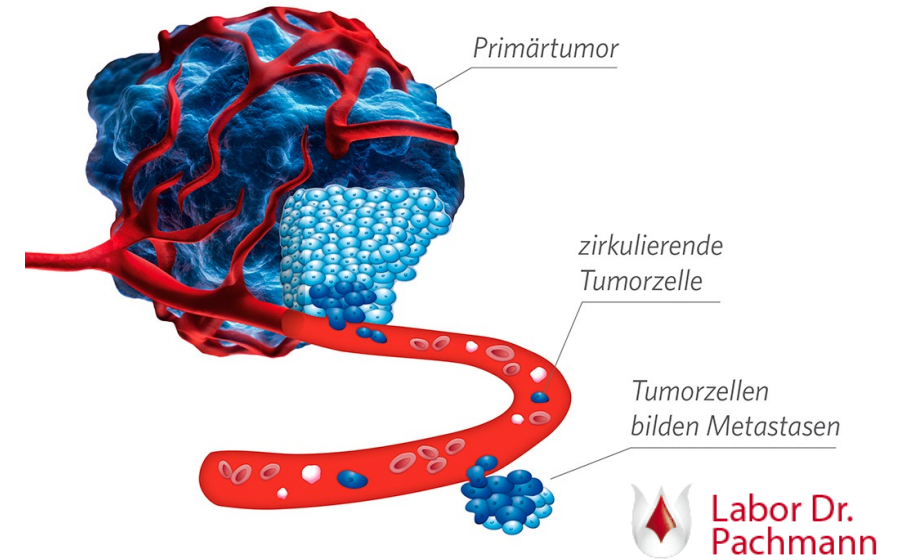
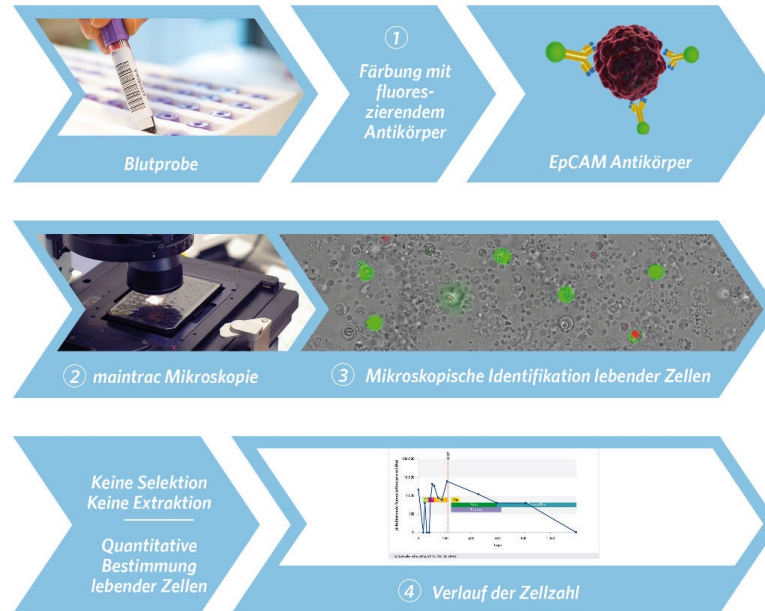
Omega-3 polyunsaturated fatty acid biomarkers and risk of type 2 diabetes, cardiovascular disease, cancer, and mortality

[Hong Jiang](#)¹, [Lina Wang](#)¹, [Duolao Wang](#)², [Ni Yan](#)¹, [Chao Li](#)¹, [Min Wu](#)¹, [Fan Wang](#)¹, [Baibing Mi](#)¹, [Fangyao Chen](#)¹, [Wanru Jia](#)¹, [Xi Liu](#)¹, [Jiaxin Lv](#)¹, [Yan Liu](#)¹, [Jing Lin](#)³, [Le Ma](#)⁴

Maßgeschneiderte Therapien über zirkulierende Tumorzellen, Sensitivitätsteste, Monitoring Transcriptomanalyse



Prof. Dr. Katharina Pachmann
Bayreuth



Mol Clin Oncol. 2021 Oct;15(4):201.

Monitoring of circulating epithelial tumor cells using the Maintrac® method and its potential benefit for the treatment of patients with colorectal cancer

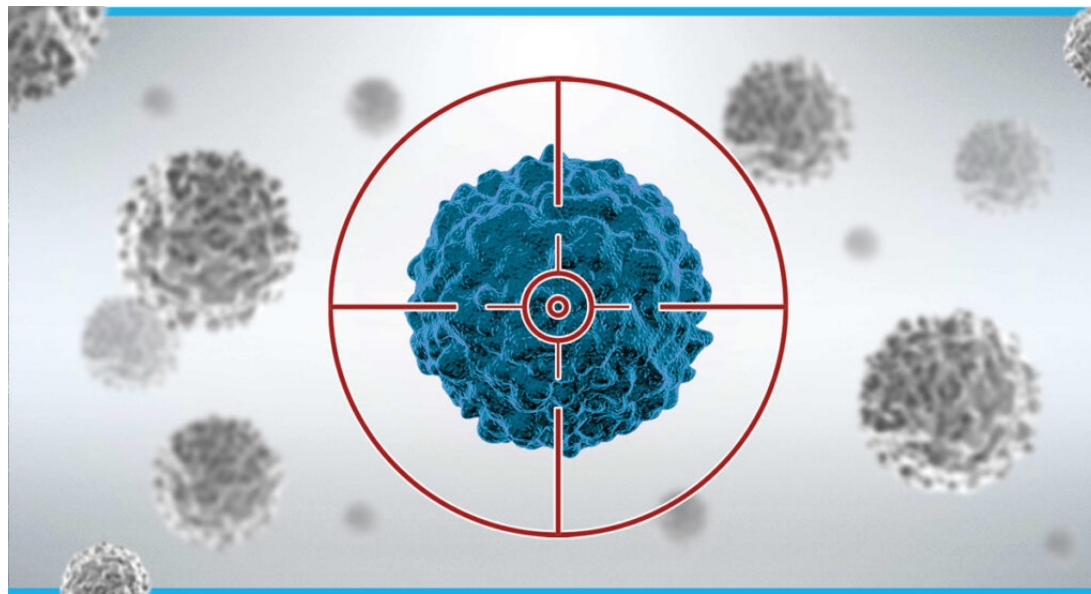
[Madeleine Gold](#)¹, [Katharina Pachmann](#)², [Alexander Kiani](#)^{3,4}, [Rainer Schobert](#)¹

Curr Oncol. 2021 Sep 8;28(5):3507-3524.

Prospective Monitoring of Circulating Epithelial Tumor Cells (CETC) Reveals Changes in Gene Expression during Adjuvant Radiotherapy of Breast Cancer Patients

[Matthias Mäurer](#)¹, [Katharina Pachmann](#)², [Thomas Wendt](#)¹, [Dorothea Schott](#)², [Andrea Wittig](#)¹

94 Publikationen



Zirkulierende freie Tumor-DNA
(cftDNA)

MUDr. Martin Luzbetak, M.Sc.

NextGen Oncology
Group

Liquid Biopsy

OmniThera Expression Profiler / früher PANTHER Assay (**PAN**-genomic **THER**apy-focused gene expression analysis) ist ein High-Tech-Test, der es ermöglicht, die Aktivität aller mehr als 20.000 menschlichen Genen gleichzeitig zu messen (Transkriptom), ergänzt durch quantitative PCR und Immunhistochemie von Genen, die eine Schlüsselrolle in wichtigen Signalwegen spielen.



Institut für
Tumorbiologie
**Prof. Dr. med.
Klaus Pantel**

Unsere Ziele in der Tumorbiologie

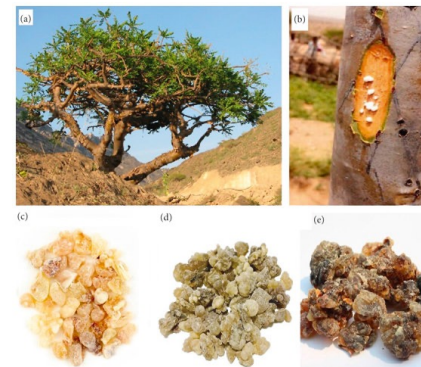
- Innovative Blut-basierte Diagnostik: Zirkulierende Tumorzellen (CTC) und zirkulierende DNA/mikroRNA („Liquid Biopsy“)
- Biologie der Metastasierung solider Tumore: Translationale Forschung mit dem Ziel innovative Krebstherapien zu entwickeln

KD, geb. 1961: Erstkonsultation 04.10.2013

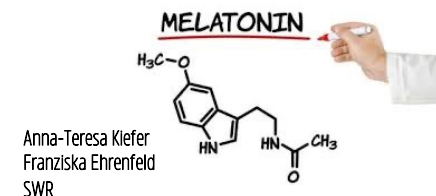
- Glioblastom, WHO Grad IV rechts temporal
- MGMT-Promotor methyliert (MDX Health)
 - 18.09.2012 Makroskopische Teilresektion
 - 10-11/2012 Radiochemotherapie (60 Gy ZVD, 75 mg/m² Temozolomid)
 - 12/2012-6/2013 6 Zyklen Temozolomid Chemotherapie 5/28 (im 2. Zyklus Thrombopenie mit Nadir 55.000/μl, Zyklus 3-6 daher mit 150 mg/m²)
 - Stammganglieninfarkt rechts mikroangiopathischer Genese am 01.08.2013
 - 12/2013 Progredienz des Primärtumors auf 2,8/3,1cm rechts temporal
- Weitere Diagnosen:
 - Symptomatische Epilepsie mit komplex-fokalen Anfällen, zuletzt 6/2017
 - Basistherapie ab 4.10.2013: Glycoplan, modifiziert ketogene Ernährung & molekulare Naturstoffe/ Phytopharmaka
 - 05.05.2022: Vollständige Remission, ausgeheilte Epilepsie.

KD hat ihren Führerschein zurück bekommen

Figure - available from: [Evidence-based Complementary and Alternative Medicine](#)



See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/334145036> Taxonomic notes on Indian Terminalia (Combretaceae) Article // Plant Science Today - July 2019 DOI: 10.14719/pst.2019.6.3.539



Pascorbin
Presseportal

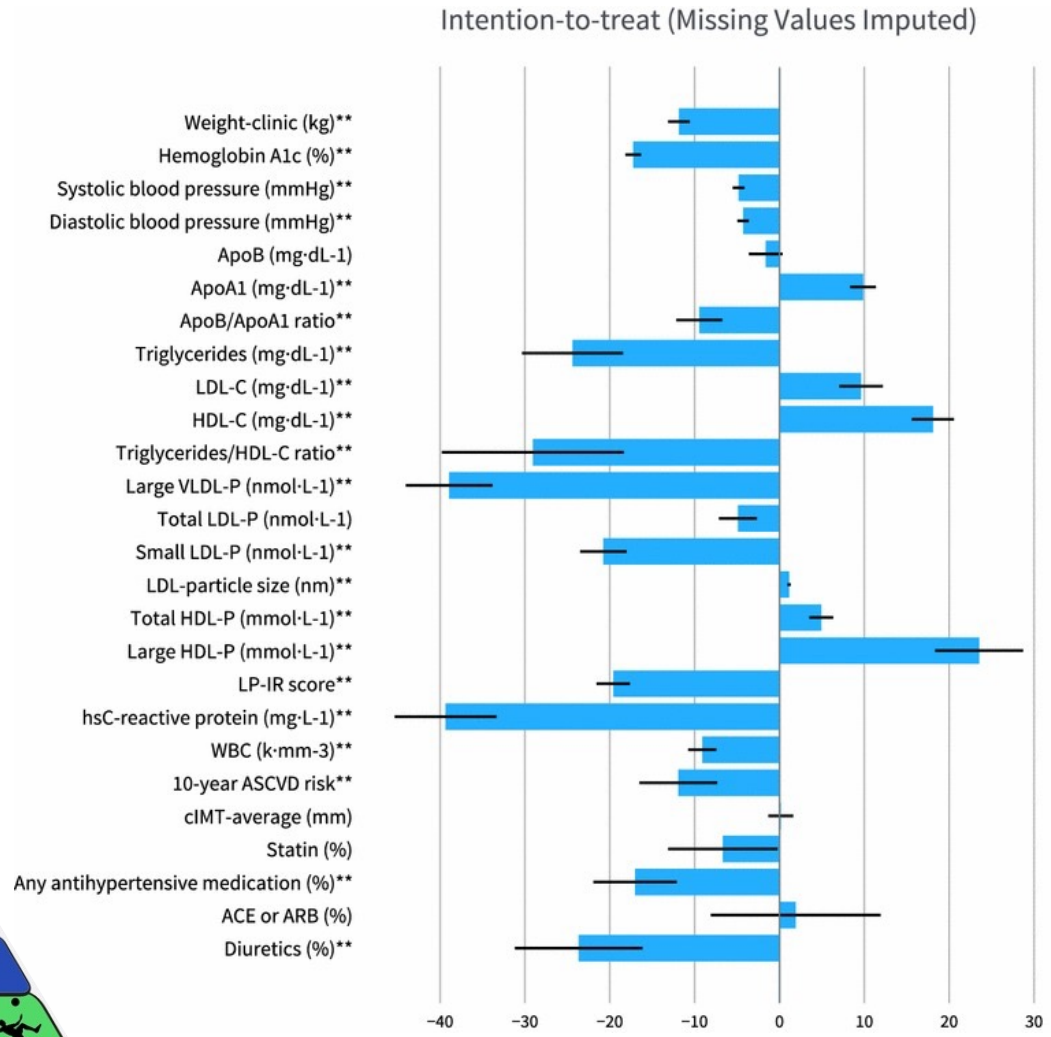
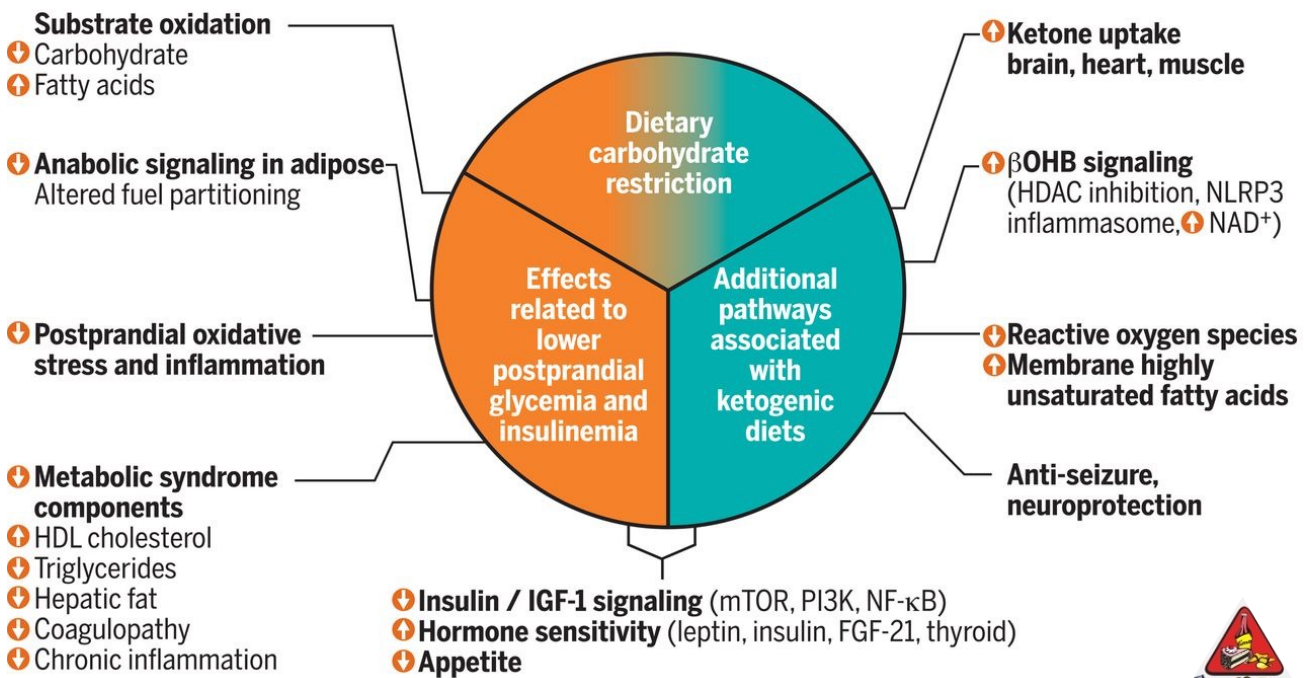
Integr Cancer Ther . 2023 Jan-Dec;22:15347354221150787.

The Role of Ketogenic Diet in the Treatment of Neuroblastoma

[Rangarirai Makuku](#)^{1,2}, [Zeinab Sinaei Far](#)^{1,3}, [Neda Khalili](#)^{1,3}, [Alistar Moyo](#)², [Sepideh Razi](#)^{1,3}, [Mahsa Keshavarz-Fathi](#)^{1,3}, [Maryam Mahmoudi](#)¹, [Nima Rezaei](#)^{1,4}



Teemana

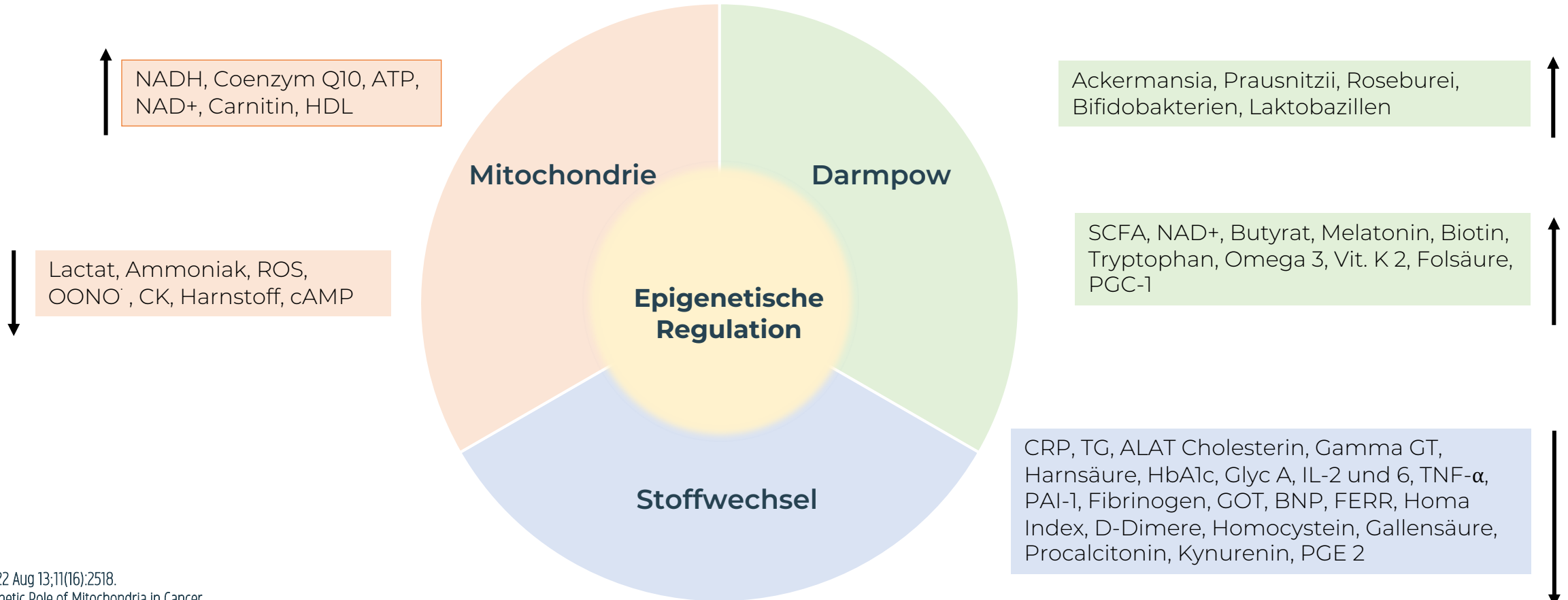


Cardiovasc Diabetol. 2020 Dec 8;19(1):208.
 Impact of a 2-year trial of nutritional ketosis on indices of cardiovascular disease risk in patients with type 2 diabetes
[Shaminie J Athinarayanan](#) #1, [Sarah J Hallberg](#) #1,2,3, [Amy L McKenzie](#) #1, [Katharina Lechner](#) #4,5, [Sarah King](#) #6, [James P McCarter](#) #7,8, [Jeff S Volek](#) #9, [Stephen D Phinney](#) #1, [Ronald M Krauss](#) #10

Cardiovasc Diabetol. 2018 May 1;17(1):56.
 Cardiovascular disease risk factor responses to a type 2 diabetes care model including nutritional ketosis induced by sustained carbohydrate restriction at 1 year: an open label, non-randomized, controlled study.
 Bhanpuri NH, Hallberg SJ, Williams PT, McKenzie AL, Ballard KD, Campbell WW, McCarter JP, Phinney SD, Volek JS

Natural Eating- Glycoplan- Phytopharmaka und Training

Curcumin, Boswellia, Reishi, Cordyceps, Ashwagandha, Astragalus, Ginseng, Goji, Myrobalan, Heidelbeere, Rote Beete, Papain, Bromelain, Curcumin, Piperin, Galactose, Mannose, Betain, Anthocyanin, Calebin A, Urolithin A, Spermidin



Cells. 2022 Aug 13;11(16):2518.

An Epigenetic Role of Mitochondria in Cancer

[Yu'e Liu¹](#), [Chao Chen²](#), [Xinye Wang¹](#), [Yihong Sun¹](#), [Jin Zhang³](#), [Juxiang Chen²](#), [Yufeng Shi^{1,4}](#)

Insulinsensitivität ↑ Entzündung ↓ mTOR, NFk-B, IL-6, IL-8, TGF β , β Amyloid, APP, Tau-P, Lp-PLA₂ ↓

1. **Phytopharmaka verfügen über ein breites Spektrum von mehrschichtigen multimodalen antientzündlichen Wirkungen.**
2. **Phytopharmaka wirken als epigenetische Regulatoren**
3. **Phytopharmaka wirken über die Microbiota regulativ auf das “Epigenetische Regulationsvermögen” verschiedener Stämme von Darmbakterien**
4. **Phytopharmaka induzieren über die Microbiom- Metabolom- Achse die Biogenese von stark wirksamen “Epigenetic Modifiers”: SCFA, NAD+, Folsäure, Biotin, Vitamin B12...**



Phytopharmaka – Eine kompakte Orientierung

First line treatment – a natural way

von [Robert Erbedinger](#), [Prof. Dr. med. Götz Welsch](#), [Dr. med. Andree Ellermann](#), [Dr. med. Christoph Michlmayr](#), [PD Dr. med. Felix Post](#), [Dr. med. Kurt Mosetter](#), [Peter Stiller](#), [Masjar Sabok Sir](#)

Front. Immunol., 16 February 2021

Sec. Nutritional Immunology

Volume 12 - 2021 | <https://doi.org/10.3389/fimmu.2021.635484>

[This article is part of the Research Topic](#)

[Dietary Polyphenols for Improving Gut Health: Volume 1](#)

[View all 23 Articles](#)

Natural Polyphenols as Targeted Modulators in Colon Cancer: Molecular Mechanisms and Applications

[Genet Med.](#) 2017 Nov;19(11):1226-1235. doi: 10.1038/gim.2017.41. Epub 2017 Jun 15.

Oral D-galactose supplementation in PGM1-CDG

D-gal supplementation was increased to 1.5 g/kg/day (maximum 50 g/day) in three increments over 18 weeks

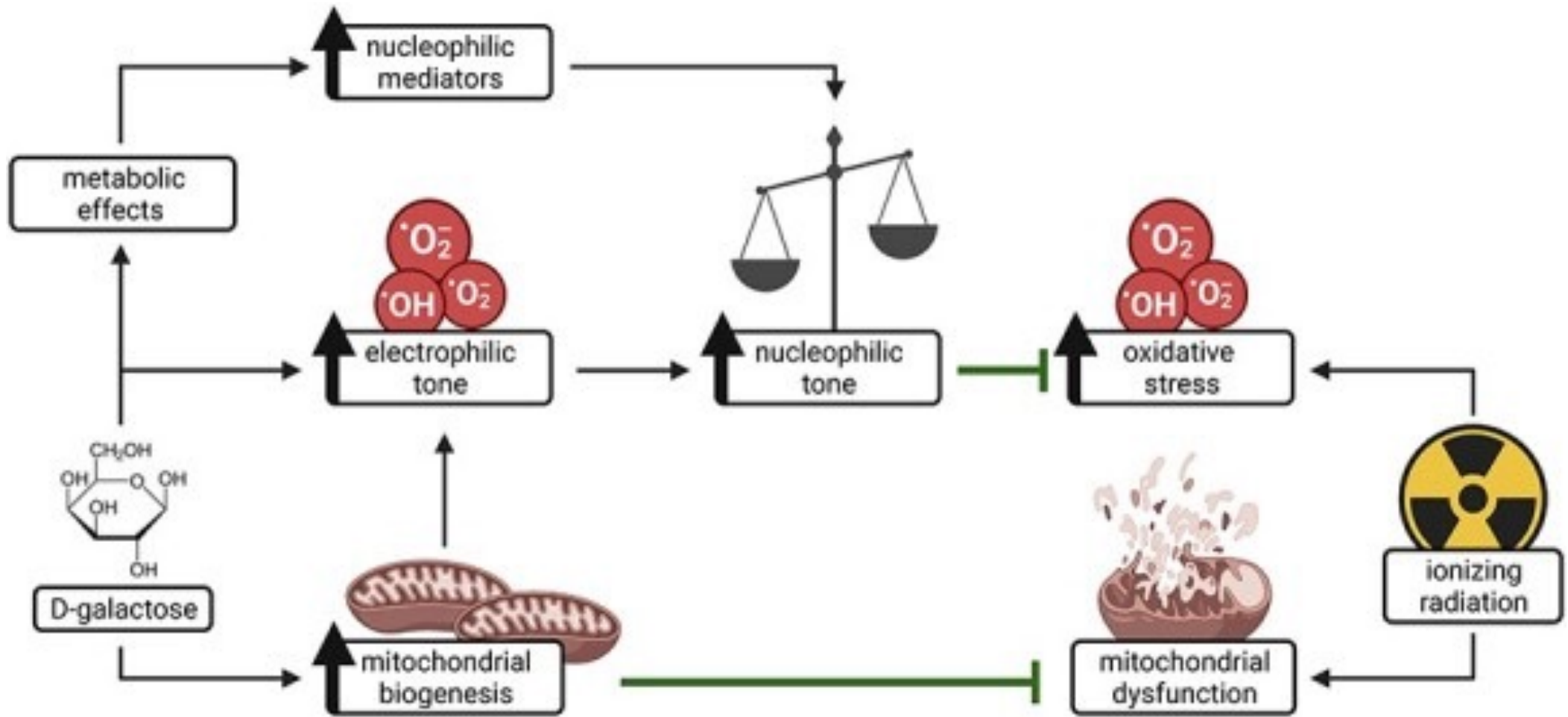
[Wong SY](#)¹, [Gadomski T](#)¹, [van Scherpenzeel M](#)², [Honzik T](#)³, [Hanskova H](#)³, [Holmefjord KSB](#)⁴, [Mork M](#)⁴, [Bowling F](#)⁵, [Sykut-Cegielska J](#)⁶, [Koch D](#)⁷, [Hertecant J](#)⁸, [Preston G](#)¹, [Jaeken J](#)⁹, [Peeters N](#)¹, [Perez S](#)¹, [Nguyen DD](#)¹, [Crivelly K](#)¹, [Emmerzaal T](#)¹⁰, [Gibson KM](#)¹¹, [Raymond K](#)¹², [Abu Bakar N](#)², [Foulquier F](#)¹³, [Poschet G](#)¹⁴, [Ackermann AM](#)¹⁵, [He M](#)¹⁶, [Lefeber DJ](#)², [Thiel C](#)¹⁷, [Kozicz T](#)^{1,10}, [Morava E](#)¹.

Galactose verbessert in verschiedenen Formen angeborener Glykogenspeichererkrankungen, Glycosylierungsdefekten und Metabolischen Entgleißungen sowohl die klinische Symptomatologie als auch alle Laborparameter wie Blutzucker, Fettwerte, Leberenzyme, (alanine transaminase, aspartate transaminase), die Gerinnung (partial thromboplastin time) und die physiologische Glykosylierung Galactose verbessert die Aktivität von Schlüsselenzymen in den Mitochondrien, dem ER und dem Golgi-Apparat. Zudem verbessert sich das Maß der defekten Glykosylierung in den verschiedenen Organellen. In diesem Sinne verbessert Galactose den Energiehaushalt, die Muskelaktivitäten, den Leberstoffwechsel und den Gehirnstoffwechsel.

[Genet Med.](#) 2020 Feb 27.

Clinical and biochemical improvement with galactose supplementation in SLC35A2-CDG.

[Witters P](#)^{1,2}, [Tahata S](#)³, [Barone R](#)⁴, [Őunap K](#)^{5,6}, [Salvarinova R](#)⁷, [Grönborg S](#)⁸, [Hoganson G](#)⁹, [Scaglia F](#)^{10,11,12}, [Lewis AM](#)¹⁰, [Mori M](#)¹³, [Sykut-Cegielska J](#)¹⁴, [Edmondson A](#)¹⁵, [He M](#)¹⁶, [Morava E](#)^{17,18,19}.



Der Chemie-Nobelpreis 2015 zeichnete die Entdeckung aus, dass die DNA nicht stabil ist, sondern konstant repariert werden muss, um schwerwiegende Erkrankungen u.a. Krebs zu verhindern.

- ▶ Tägliche Schädigung der DNA durch UV-Licht, ionisierende Strahlung, metabolische Prozesse (ROS)
- ▶ Tägliche Belastung normaler menschlicher Zellen in vivo mit DNA-Schädigungen
Ereignisse pro Zelle pro 24h:
 - 50.000 DNA-Einzelstrangbrüche (engl. SSB)
 - 2.000 Oxidative Schäden (ROS)
 - 10 Doppelstrangbrüche (engl. DSB)

- ▶ DNA-Reparatur ist überlebenswichtig, sonst:
 - **rapide Alterung der Zellen**
 - erhöhtes Krebsrisiko

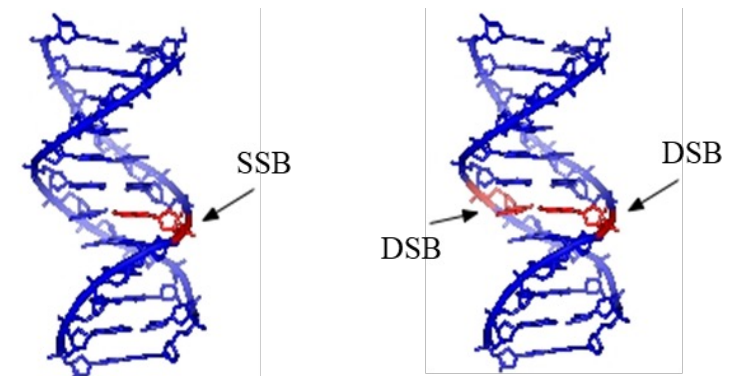


Thomas
Lindahl

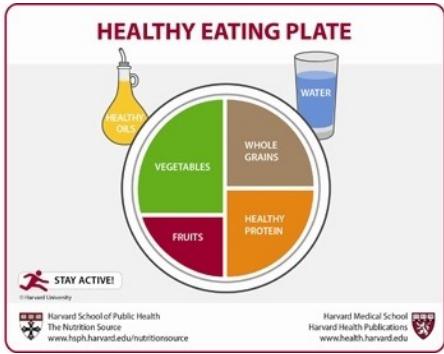
Paul Modrich

Aziz Sancar

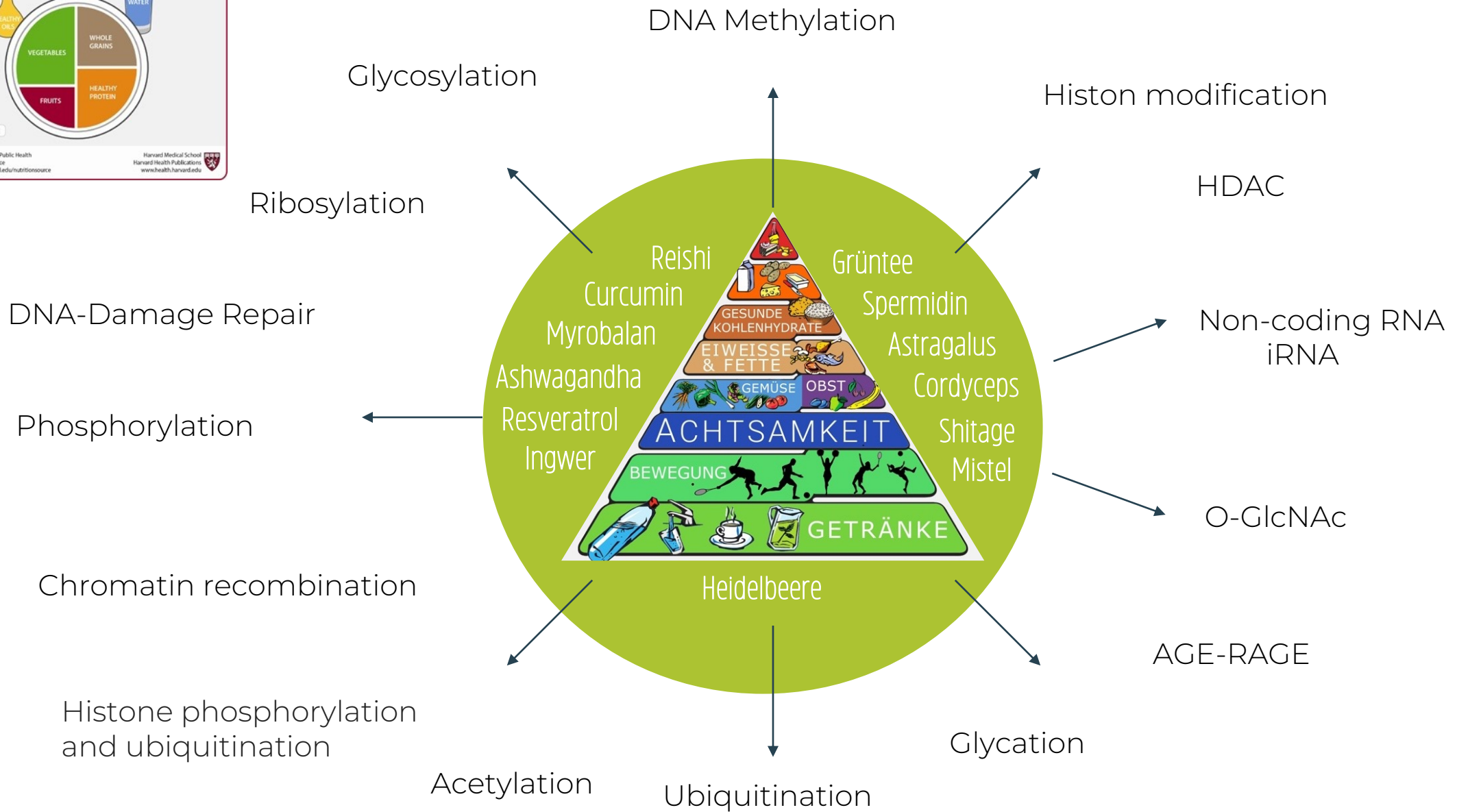
**Nobelpreis für Chemie 07.10.2015:
„Mechanismen der DNA-Reparatur“**



Wikimedia Commons

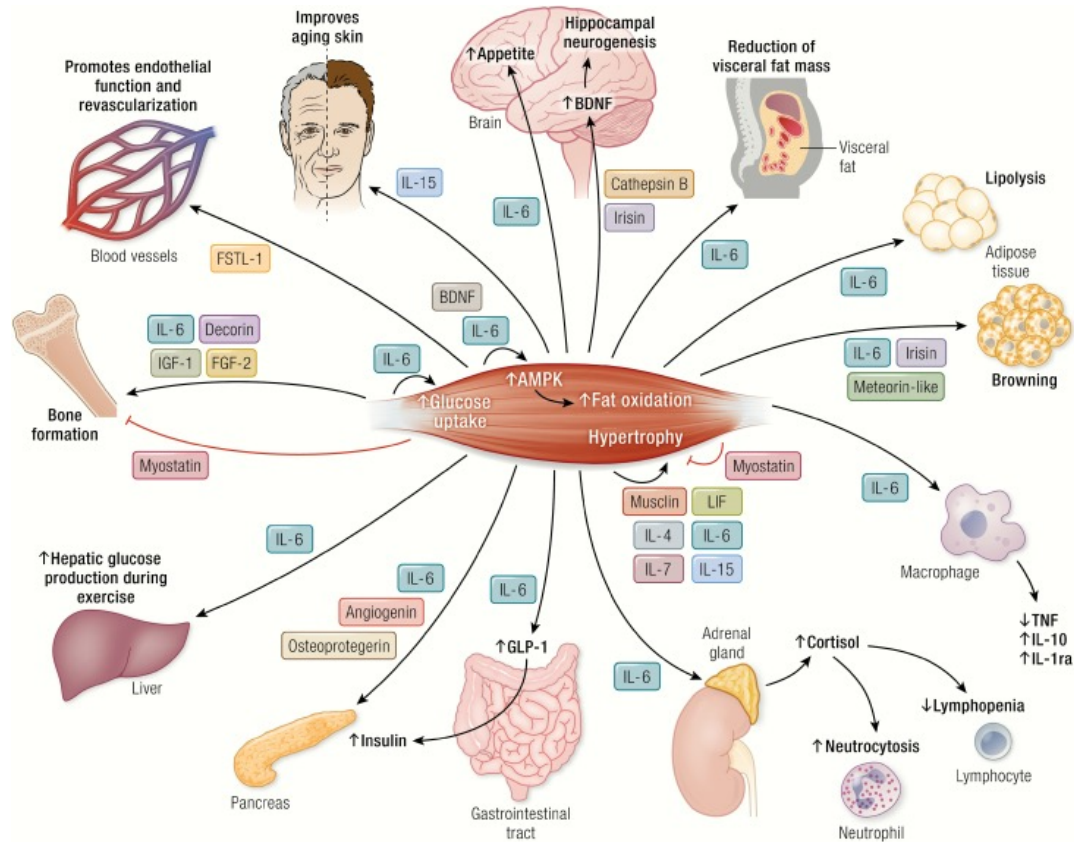


Epigenetische Spielregeln, Ernährungs- & Darmfaktoren, Natursubstanzen

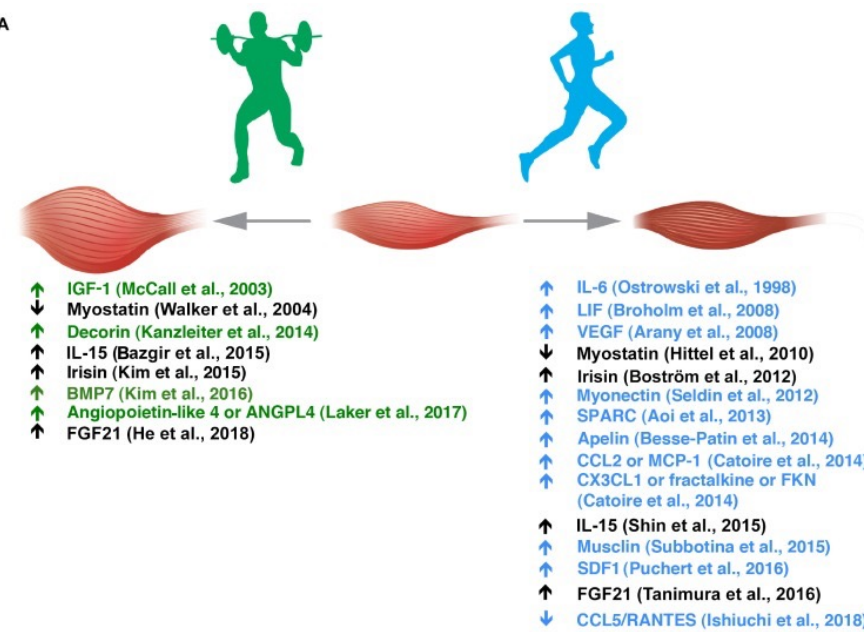


Training als Therapie

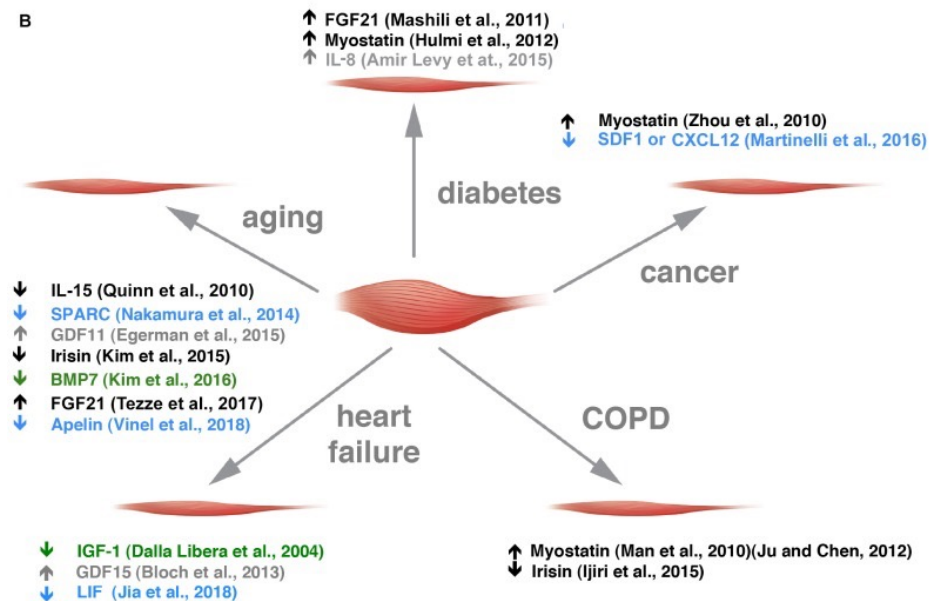
Muskel-Immun-Gehirn-Gesundheit



A



B



physical activity health: 1323910 Treffer in pubmed
5798 Publikationen zu Myokine und Health

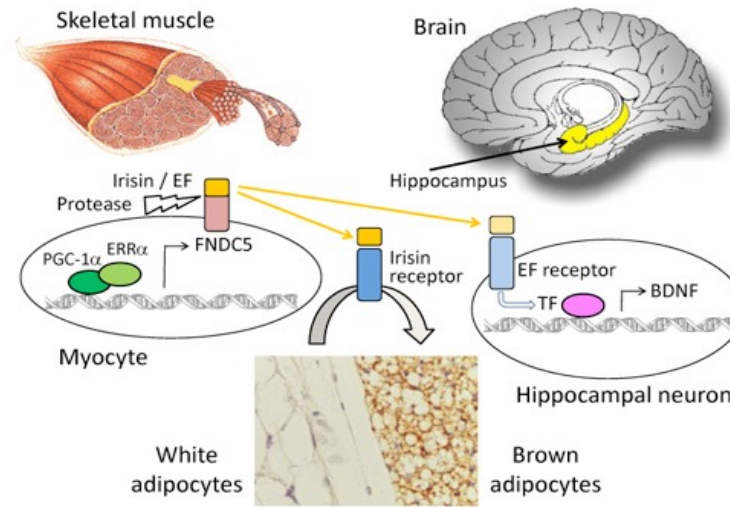
Muscle-Organ Crosstalk: Focus on Immunometabolism. Bay ML, Pedersen BK
Front Physiol. 2020 Sep 9;11:567881

Front Physiol. 2019; 10: 287.
Exercise-Induced Myokines With Therapeutic Potential for Muscle Wasting
Rosanna Piccirillo

Für alle, die scheinbar nicht mehr können: **Galileo** individualisiertes Training!

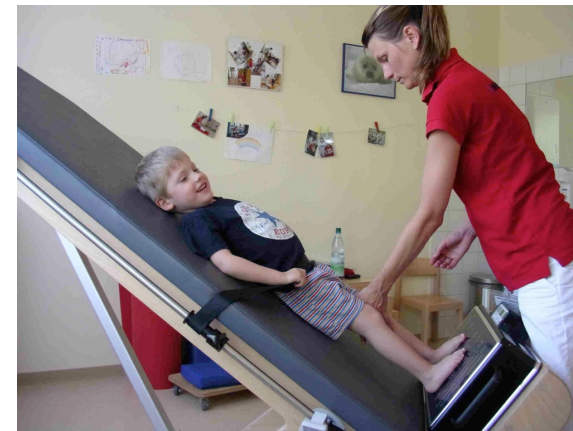


Prof. Dr. Dieter Felsenberg,
Charite Universitätsmedizin Berlin
ESA



Richtiges Training und hochwertige Ernährungsweisen schalten die Gene für Muskeln, Knochen, Gehirn, stabile Hormone, den Fett- und Zuckerstoffwechsel und den Immunstatus an...

Zentrum für interdisziplinäre Therapien, Konstanz, Gutach, Freiburg, Baar

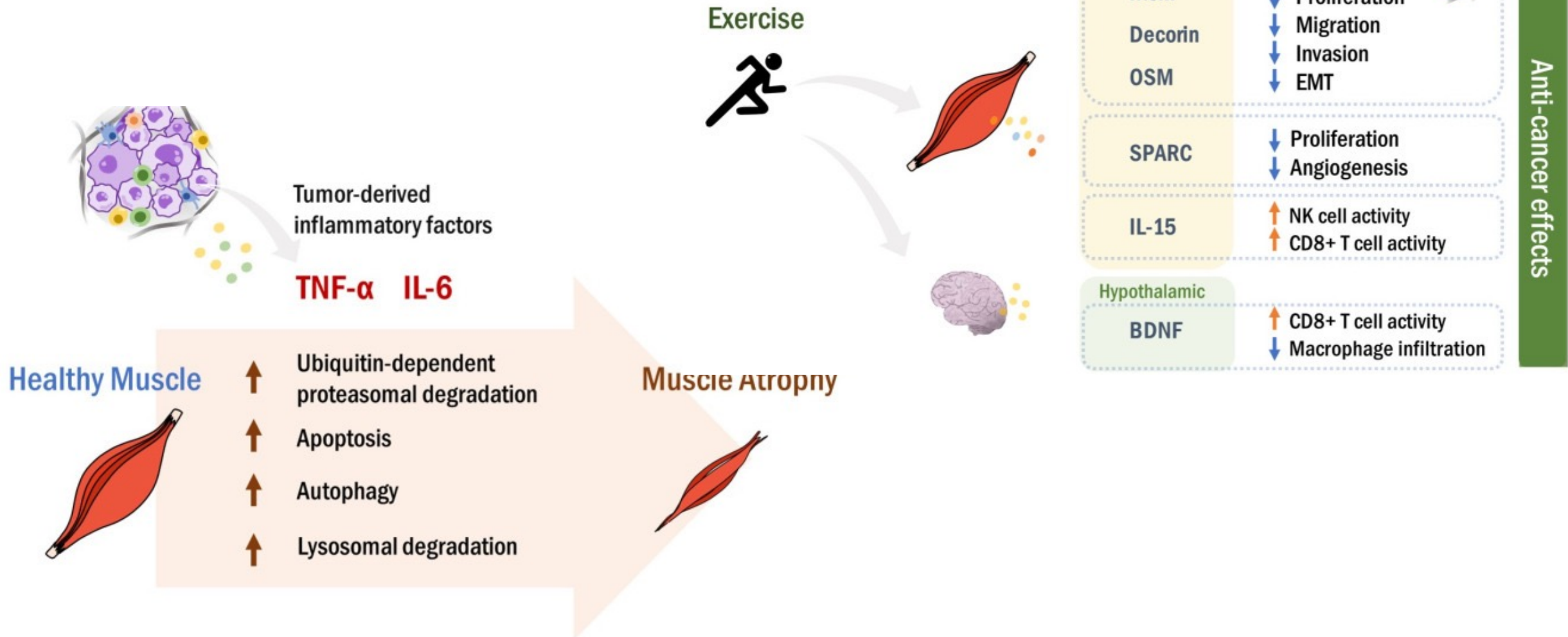


Drug Discov Ther . 2018;12(4):239-247.

Whole body vibration exercise in the management of cancer therapy-related morbidities: A systematic review

[Patrícia Lopes-Souza](#)^{1,2}, [Carla Fontoura Dionello](#)^{1,2}, [Danúbia da Cunha Sá-Caputo](#)^{2,3}, [Eloá Moreira-Marconi](#)^{2,4}, [Eric Heleno Freire Ferreira Frederico](#)^{2,5}, [Renata Marques Marchon](#)^{2,4}, [Anke Bergmann](#)⁶, [Trentham Furness](#)⁷, [Mario Bernardo-Filho](#)²

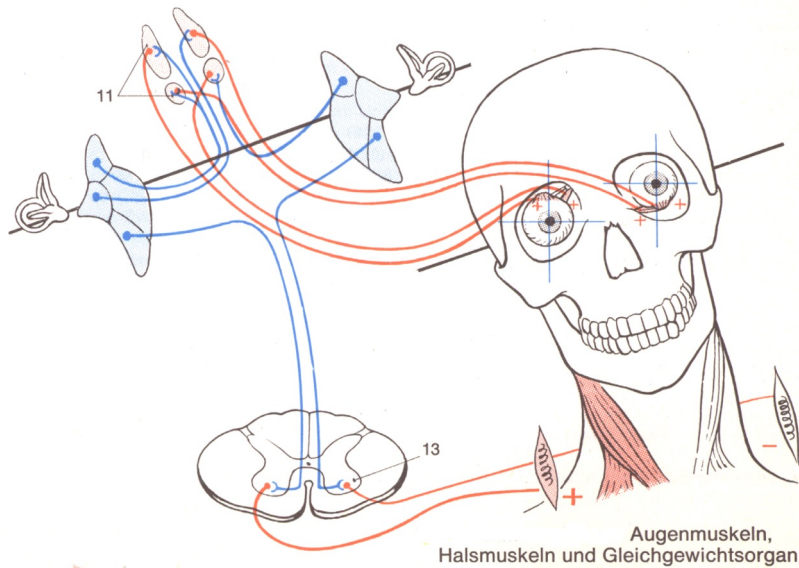
Entzündungs- & KrebsSCHUTZ



[BMB Rep.](#) 2023 Jul 31; 56(7): 365–373.

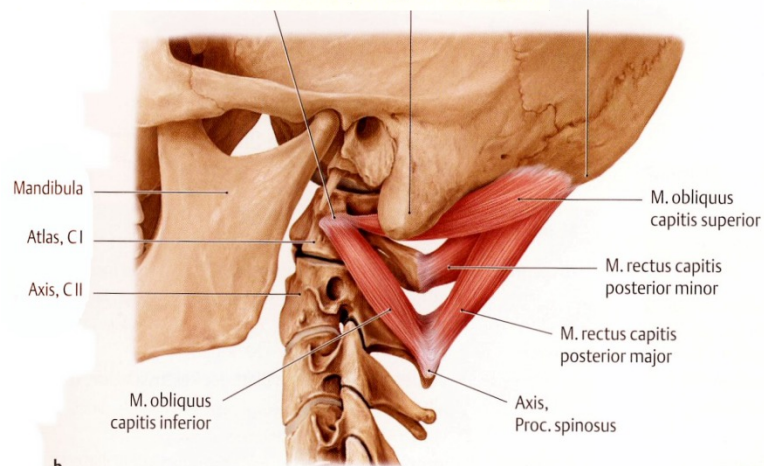
The role of myokines in cancer: crosstalk between skeletal muscle and tumor

[Se-Young Park](#),^{1,2,3} [Byeong-Oh Hwang](#),^{1,2,3} and [Na-Young Song](#)^{1,2,3,4,*}



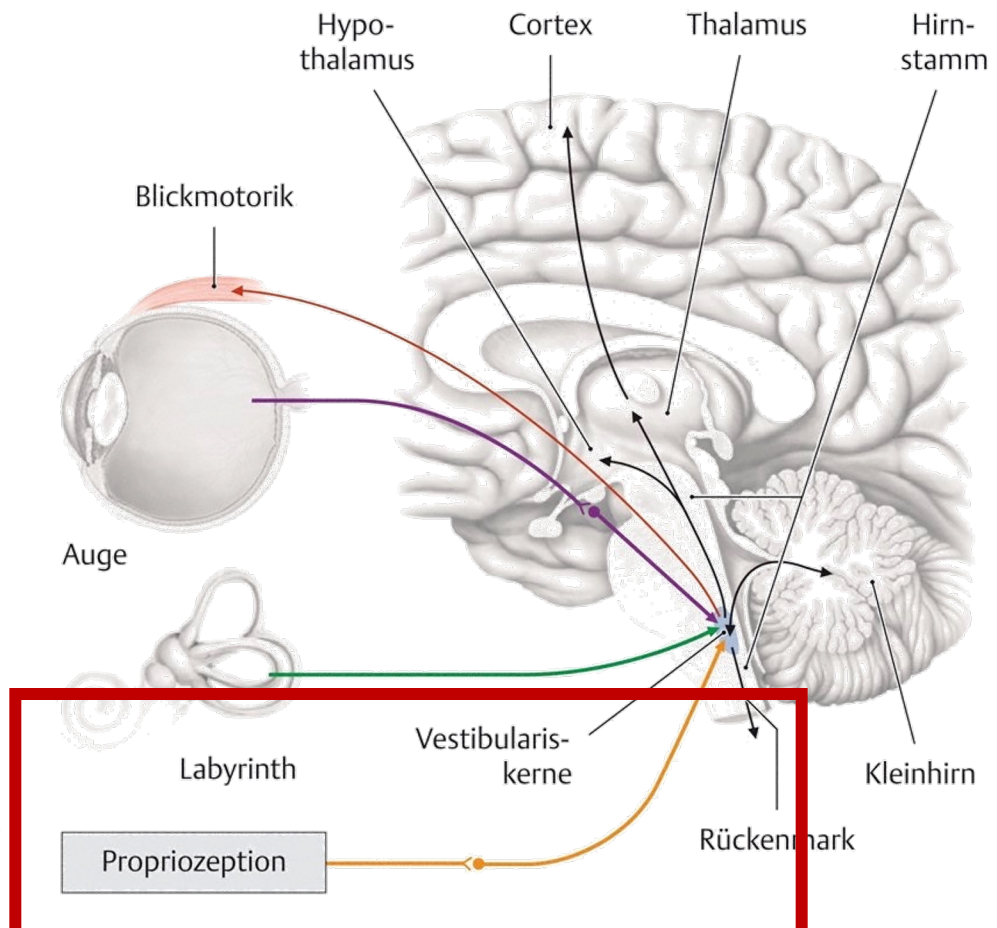
The inner GPS Train your eyes and your brain

Nobelprize in Medizin 2014
May-Britt Moser and Edvard I. Moser



b
Platysma
Pannicular fascia
Myo-dural bridges
Interoception
X.

100 000 000 Mio
Messfühler!



Central role of the neuro motor neuro-muscular junctions and the synchronized nerve-cell-networks of vestibular nuclei in maintaining equilibrium, to execute higher cognitive functions...

Myoreflextherapie

Ein neuer therapeutischer Ansatz für unspezifische Post-COVID Symptome

Josefine C. Baudrex1; Kurt Mosetter2, Daniel Gagiannis1

¹ Klinik für Innere Medizin, Abteilung für Pneumologie, Bundeswehrkrankenhaus Ulm
² Zentrum für interdisziplinäre Therapien, Konstanz

Hintergrund:

Trotz des Endes der SARS-CoV-2 Pandemie sind deren Auswirkungen noch spürbar. Mit über 100.000 Betroffenen alleine in Deutschland stellt die Diagnose des Post-COVID-Syndroms das Gesundheitssystem vor eine neue Herausforderung. Die Symptome und deren Ausprägung sind vielseitig und unspezifisch. Der zugrundeliegende Pathomechanismus ist bis jetzt nicht abschließend geklärt. Noch gibt es kein einheitliches Therapieregime und gerade bei den unspezifischen Symptomen wie Konzentrationsstörungen, verminderter körperlicher Belastbarkeit und dem Fatigue-Syndrom sind die Therapieoptionen häufig begrenzt. Die Betroffenen haben einen hohen Leidensdruck und fühlen sich in ihrer Lebensführung eingeschränkt. Deshalb besteht dringender Bedarf nach neuen, wirksamen Therapien, die man den Betroffenen anbieten kann.

Methodik:

In der Abteilung für Pneumologie im Bundeswehrkrankenhaus Ulm wurde an Patienten mit unspezifischen Post-COVID Symptomen die Myoreflextherapie angewandt, die bis dato auch im Bereich des Hochleistungssports Anwendung findet. Als ganzheitliches Therapiekonzept vereint die Myoreflextherapie Elemente aus verschiedenen anderen wissenschaftlichen Fachdisziplinen, wie der Physiotherapie, der manuellen Therapie, der Akupunktur, der Osteopathie etc. Die Patienten in der Interventionsgruppe erhielten 5 Sitzungen Myoreflextherapie. Mittels Spiroergometrie wurde der Einfluss der Therapie auf die Lungenfunktion der Patienten erfasst. Es wurden insgesamt 92 Patienten in die Studie eingeschlossen. Hiervon erhielten 40 Patienten eine Myoreflextherapie und 52 Patienten erhielten keine Myoreflextherapie.



Bild 1. und Bild 2. Myoreflextherapie durchgeführt von Kurt Mosetter

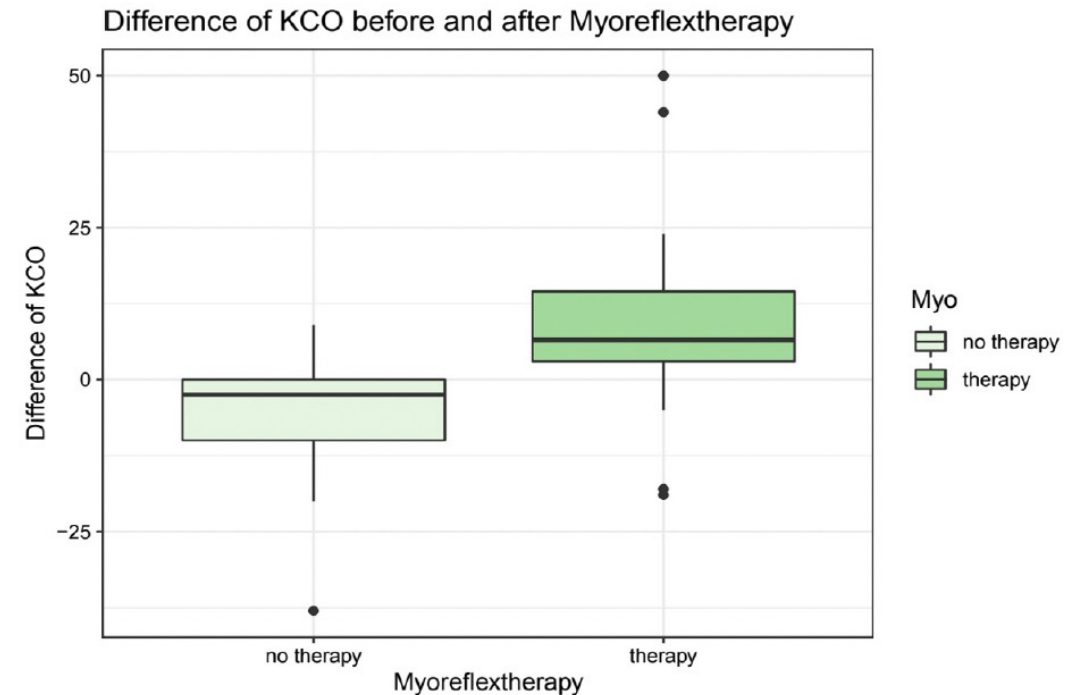


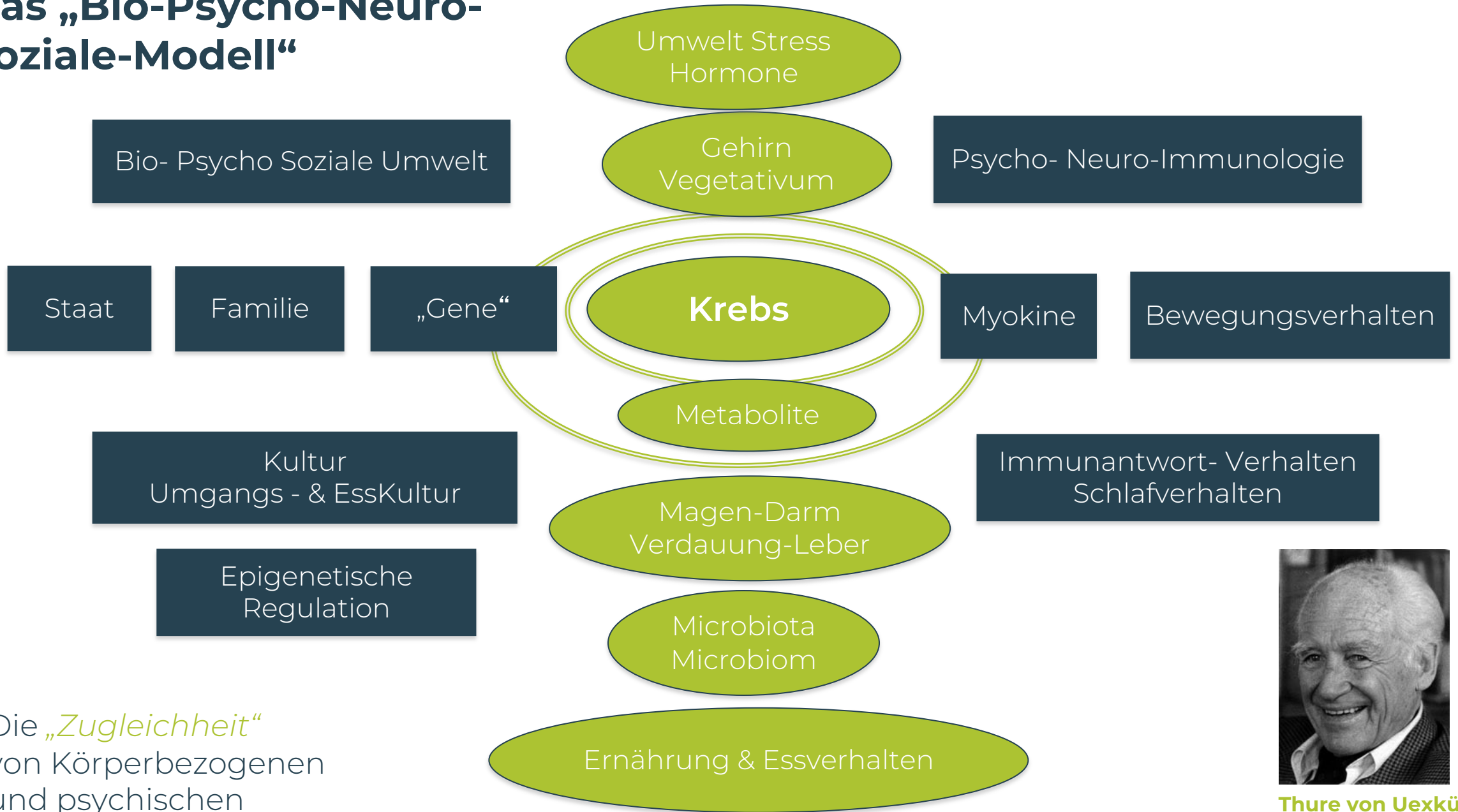
Bild 3. KCO bei Patienten ohne und mit Myoreflextherapie

VERSUS:

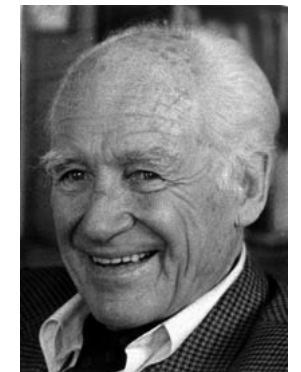
Pain Management in the Post-COVID Era-An Update: A Narrative Review

Salah N El-Tallawy, Joseph V Perglozzi, Rania S Ahmed, Abdullah M Kaki, Mohamed S Nagiub, JoAnn K LeQuang, Mamdouh M Hadarah
Pain Ther. 2023 Feb 28;1-26.

Das „Bio-Psycho-Neuro-Soziale-Modell“



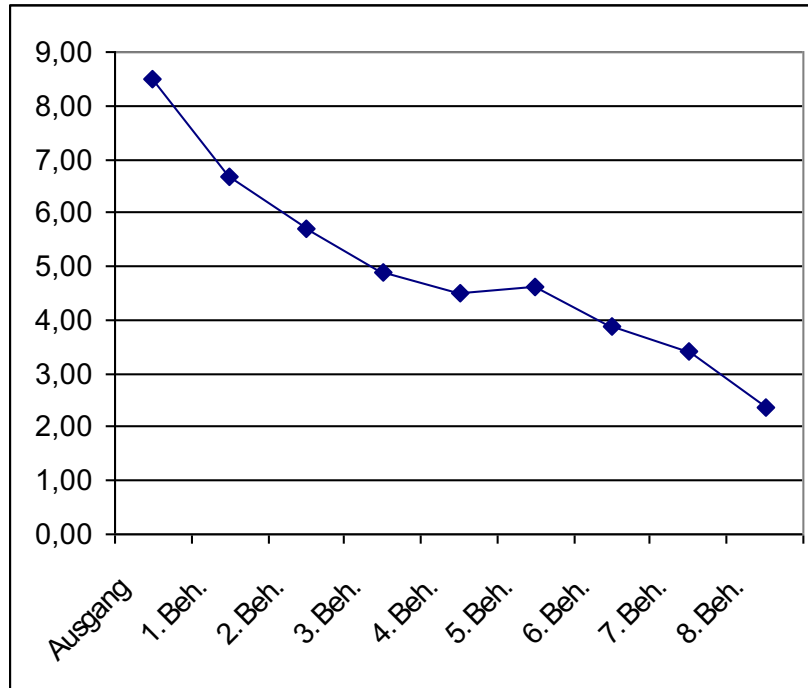
Die „Zugleichheit“ von körperbezogenen und psychischen Symptomen.



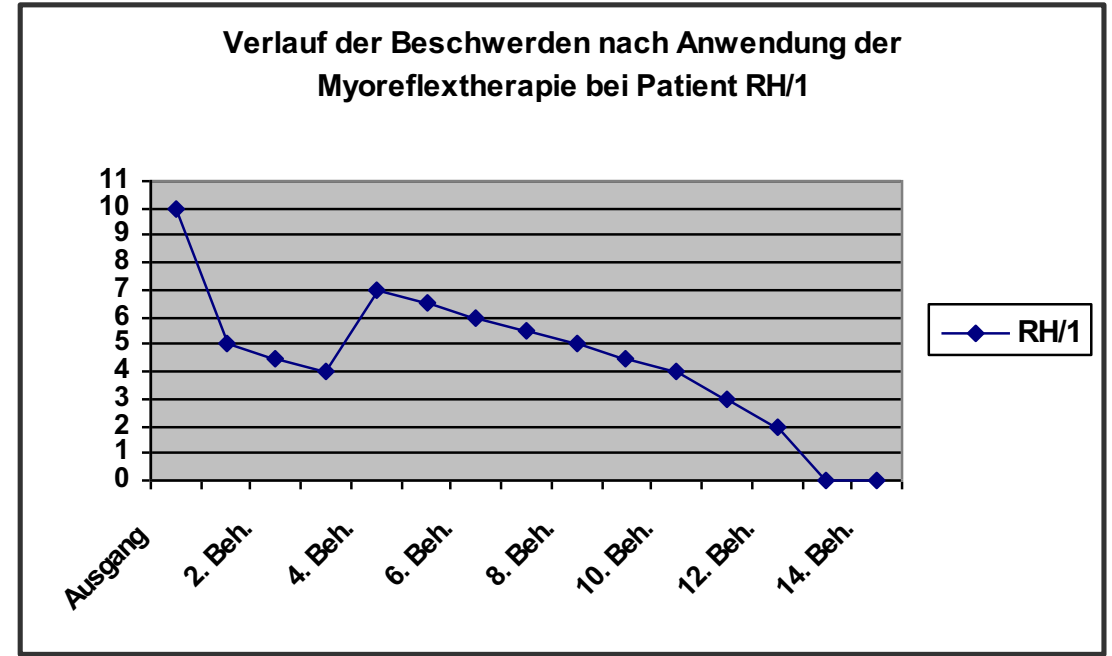
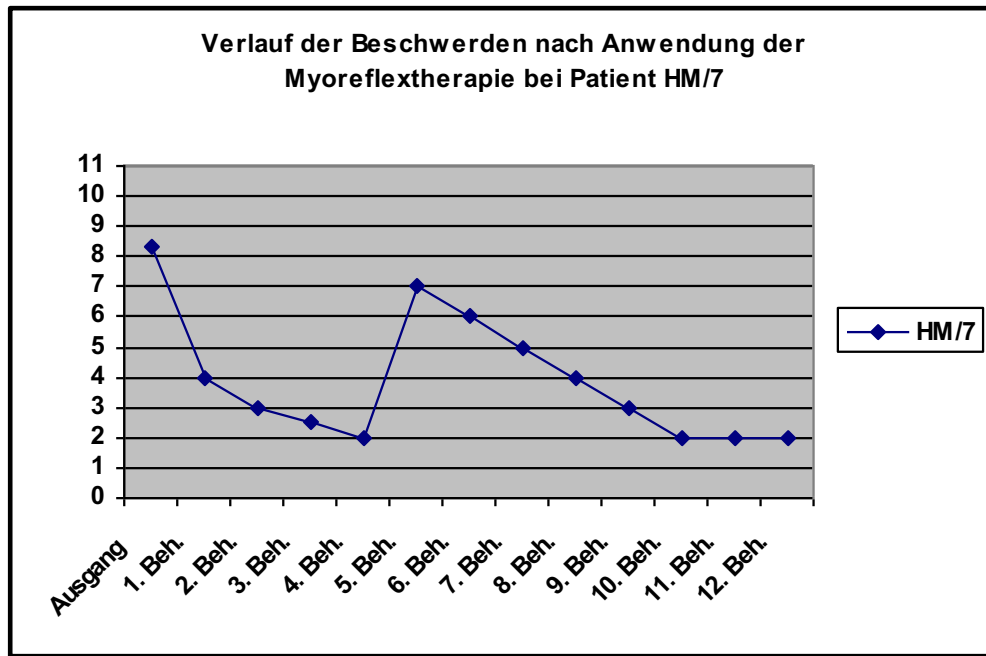
Thure von Uexküll
1908 – 2004

Myoreflextherapie: Die Berührung von Körper, Psyche & Seele in einer „Zugleichheit“

Nach ca. sechswöchiger Therapie ergaben sich in allen Symptomskalen Effektstärken für die Behandlung, die gemäß den Cohenschen Konventionen als sehr groß zu beurteilen sind.“ (Muth u. Bering 2009)



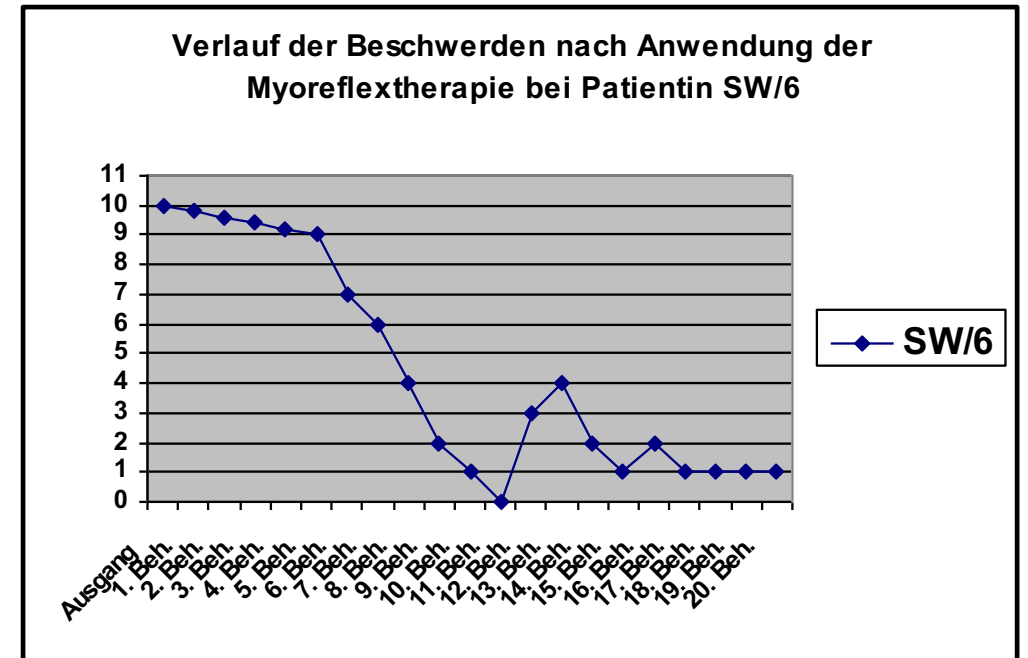
Schmerzanalogskala
[10 = unerträglich
bis 0 = schmerzfrei]



Signifikante Wirkungen

Statistische Werte bei:

- Körperlichen Beschwerden 1.75
- Grundstimmung 1.00
- Leidensdruck 0.85
- Problembewältigungsverhalten 1.60
- Veränderung der Stärke der Beschwerden 3,65



Danke an unser Team sowie allen Betroffenen für das lehrreiche Miteinander!

Einladung in die
Gesundheits-Kultur-Community
„Haus der hellen Köpfe“

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Dr. med. Matthias Kraft
Dr. med. Helmut Knorr
Dr. med. Henning Sator
Prof. Dr. med. Burkhard Schütz
Dr. med. Ulrich Volz
Dr. med. Bernd Dellvig
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Dr. med. Olaf Kuhnke
Prof. Dr. med. Alexander Karabatsiakis



Dr. med. Kurt Mosetter



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**Dr. med. univ. Bernadette
Mansmann**



Abel Martinez
Therapeut



Alexander Pfeil
Therapeut



Erla Hildebrandt
Therapeutin



Christina Ullrich
Therapeutin



Marie Weber
Therapeutin



Bernhard Fürderer
Therapeut



Patrick Hawle
Therapeut



Günther Miez
Therapeut



Pascal Miez
Therapeut